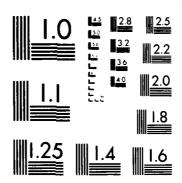
DEPARTMENT OF THE ARMY JUSTIFICATION OF ESTIMATES FOR FISCAL YEARS 1988/1 (U) DEPUTY CHIEF OF STAFF FOR RESEARCH DEVELOPMENT AND ACQUISITIO JAN 87 F/G 15/5 AD-A184 289 1/2 UNCLASSIFIED NL



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AD-A184 209



# DEPARTMENT OF THE ARMY

JUSTIFICATION OF ESTIMATES FOR FISCAL YEARS 1988/1989
PROCUREMENT APPROPRIATIONS-CONSTRUCTION PROGRAM
SUBMITTED TO CONGRESS
JANUARY 1987



**DD FORMS 1391** 



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DEPARTMENT OF THE ARMY
Office of the Deputy Chief of Staff
for
Research, Development and Acquisition

# DEPARTMENT OF THE ARMY JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1988/1989

## FY 1988 - PRODUCTION BASE SUPPORT

P-1 Line No: <u>32</u>

APPROPRIATION: Procurement of Missiles, Army

Installation	Project No.	Project Title	Cost Estimate (\$000)	Page No.
Redstone Arsenal, Alabama	8822290-1	Modernization, Propellant Deaeration	1.250	2
Redstone Arsenal, Alabama	8822290-2	Modernization, Small Motor Finishing	1.850	б

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ByDistribut/re/	NUTY -
Availation to Colors  Availation year  Dist of Special	2 2
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PROGRAM ELEMENT 6. CATEGORY CODE TEMP Production B 222 90 2209-  PRIMARY FACILITY Propellant Deaeration S  SUPPORT FACILITIES Electric Service Water, Sewer & Gas  Proper Temp 7. PROJECT NUMBER TEMP 2209- 9. COST ESTIMATES  U//  S  L  L  L  L  L  L  L  L  L  L  L  L	ella I	8. PROJEC	UNIT COST	, 250 COST (90000
PROGRAM ELEMENT 6. CATEGORY CODE TEMP Production B 222 90 2209- 9. COST ESTIMATES  ITEM U// PRIMARY FACILITY Propellant Deaeration S  SUPPORT FACILITIES Electric Service Water, Sewer & Gas L	I F	8. PROJEC	UNIT COST	, 250 COST (90000
Production B 222 90 2209-  9. COST ESTIMATES  ITEM U//  PRIMARY FACILITY Propellant Deaeration S  SUPPORT FACILITIES Electric Service Water, Sewer & Gas L	F	QUANTITY	UNIT	, 250 COSY (9000)
PRIMARY FACILITY Propellant Deaeration  SUPPORT FACILITIES Electric Service Water, Sewer & Gas  L	F		UNIT	920
PRIMARY FACILITY Propellant Deaeration  SUPPORT FACILITIES Electric Service Water, Sewer & Gas  L	F		COST	920
PRIMARY FACILITY Propellant Deaeration S  SUPPORT FACILITIES Electric Service L Water, Sewer & Gas L	F		COST	920
Propellant Deaeration S  SUPPORT FACILITIES Electric Service L Water, Sewer & Gas L		3,150	292.00	
SUPPORT FACILITIES  Electric Service L Water, Sewer & Gas L		3,150	292.00	920)
Electric Service Water, Sewer & Gas L				
Paving, Walks, Curbs & Gutters Site Imp( 48)Demo( )	5	   	   	147 14) 16) 38) 31) 48)
SUBTOTAL CONTINGENCY PERCENT (10.00%) TOTAL CONTRACT COST	-			1,067 107 1,174
SUPERVISION, INSPECT & OVHD ( 5.60%) TOTAL REQUEST TOTAL REQUEST (ROUNDED)				66 1,240 1,250
INSTALLED EQUIPMENT-OTHER APPROP			k	0)

This project provides a propellant deaeration building for efficient production of solid rocket motors. It replaces facilities which were designed in 1938-1942 for making artillery shells.

11. REQUIREMENT: 3,150 SF ADEQUATE: SF SUBSTD: 0 SF PROJECT:

This project is for the replacement of a building that provides the mechanical air removal from propellant prior to its casting into rocket motors. It also provides a support area for the clean up of equipment used in the casting process. The building is designed for 1.1 hazard class propellant and complies with intraline building spacing and revetment

protection safety requirements.

1. COMPONENT	FY 1988 MILITARY CONSTRUCTION PROJECT DATA	JAN 1987
3. INSTALLATIO REDSTONE ARSE	N AND LOCATION NALMICOM	
Alabama		
4. PROJECT TITE	.E	5. PROJECT NUMBER
Modernization		TEMP
Propellant De	aeration (K)	2209-1

#### REQUIREMENT :

This facility is required in close proximity to the rocket motor casting operation. It provides a preparation area for both propellant and equipment to assure quality of the product, cleanliness of equipment and safety during the casting process. The current facility has deteriorated to a point where it is no longer feasible to repair it to meet safety and efficiency standards. The newer 1.1 hazard class propellants required for present and future tactical rocket motors demand higher safety standards and are not compatible with current 1.3 hazard class propellants. Increased safety requirements for 1.1 class propellants specified in AMCR 385-100 will be met with the new facility.

#### **CURRENT SITUATION:**

Rocket motor manufacturing and loading is now being performed in buildings designed for artillery shell loading in 1938-1942. Some additional facilities were provided in the late 1950's. They were designed for 1.3 hazard type propellants. The new 1.1 hazard type propellant has more demanding building safety requirements, greater spacing between buildings, and is not compatible with present 1.3 hazard type propellant. The present building has deteriorated to a point where it is no longer economically feasible to maintain it to sustain a safe production capability for small rocket motors.

#### IMPACT IF NOT PROVIDED:

If not provided the current facility will require extensive above normal maintenance and will require evaluation for safety waivers to remain a useful production facility. Production efficiencies resulting from balanced production line capacity will not be realized. Ultimately the current facility will not be able to provide the temperature and atmospheric controls necessary to produce 1.1 class propellant.

#### ADDITIONAL:

This project is part of a modernization program begun in 1985 to provide upgrade the government owned capability to produce small rocket motors. New

1. COMPONENT	2. DATE	
	NALMICOM	
4. PROJECT TITL Modernization Propellant De		5. PROJECT NUMBER TEMP 2209-1
Propertant De	aeracion (K)	
	s require that 1.3 class facilities be replaced using 1.1 class operations.	d by facilities

THOMAS D. REESE

Major General, USA Commanding

ESTIMATED	CONSTRUCTION START:	OCTOBER	1987	INDEX:	1555
ESTIMATED	MIDPOINT OF CONSTRUCTION:	JULY	1988	INDEX:	1590
ESTIMATED	CONSTRUCTION COMPLETION:	APRIL	1989	INDEX:	1623

1. COMPONENT			2. DATE 4007
ARMY	FY 19 <sup>88</sup> MILITARY CONSTRUCTION PROJECT I	DATA	2. DATE 1987
	N AND LOCATION		
REDSTONE ARSE Alabama	NALMICOM		
4. PROJECT TITL		T 5.	PROJECT NUMBER
Modernization			TEMP
Propellant De	aeration (K)		2209-1
			,
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		35 (\$000)
B. NUMBER OF	ADDITIONAL PERSONNEL NECESSARY TO CARRY		(4000)
OUT THE FU	NCTION OF THE PROPOSED FACILITY		4
C. ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
	D FACILITY		1000
D ECTIMATED	ATTE CUCKE COCK TO OBERATE AND WATNEATH		(\$000)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN NG FACILITY IF NEW FACILITY IS A		
	T		
			(\$000)
E. PLANNING A	ND DESIGN DATA (ESTIMATE)		!
l. STATUS			
	DATE DESIGN STARTED		JUL 84
b.	PERCENT COMPLETE AS OF JANUARY 15 1987		100
	PERCENT COMPLETE AS OF OCTOBER 1 1987		100
d.	DATE DESIGN COMPLETED		DEC 86
2. BASIS			
l .	DARD OR DEFINITIVE DESIGN YES X	ИО	1
D. WHER	E DESIGN WAS MOST RECENTLY USED:		•
			<u>:</u>
	OTAL - \$000)		
	UCTION OF PLANS AND SPECS OTHER DESIGN COSTS		
	L COST (c) = (a)+(b) OR (d)+(e)		
d. CONT	RACT		i
e. IN H	OUS E		
4. CONSTRU	CTION START DATE (PLANNED)		OCT 87

Secretary Secretary

1. COMPONENT	FY 19	38 MILITARY C	ONSTR	RUCTIO	ON PR	OJECT DAT	2. DATE	1411 <b>1987</b>
3. INSTALLATION AI REDSTONE AI Alabama		N		ı	loderi	TLE nization Motor Fin	ishing (	<u> </u>
5. PROGRAM ELEME	NT 6. C	222 90	7. PROJ		MP 09-2	8. PROJEC	T COST (\$0	1,850
<del></del>	*******	9. 0	COST EST	IMATES				
		ITEM			U/M	QUANTITY	COST	COST (\$000)
PRIMARY FAC		shing Building			s f	4,200	355.9	1,495 ( 1,495)
Water, Steam, G	: Service Sewer & ( Chilled W		st		LS LS LS LS	  		98 ( 29) ( 18) ( 12) ( 39)
TOTAL REQUE	RACT COST N, INSPEC EST (ROUN	CT & OVHD ( 5.60	0%)					1,593 159 1,752 98 1,850 1,850

#### 10. Description of Proposed Construction

This building provides small motor finishing operations for 1.1 and 1.3 hazard classification solid rocket motors. Safety requirements in AMCR 385-100 will be met.Building will be heated and air conditioned.

11. REQUIREMENT: 4,200 SF ADEQUATE: 0 SF SUBSTD: 0 SF PROJECT:

This building is needed for finishing operations for 1.1 motors loaded, cured, and assembled elsewhere in this line.

1. COMPONENT	1. COMPONENT  FY 1988 MILITARY CONSTRUCTION PROJECT DATA			
	ON AND LOCATION			
REDSTONE ARS	ENAL			
4. PROJECT TIT	LE	5. PROJECT NUMBER		
Modernizatio		TEMP		
Small Motor	Finishing (S)	2209-2		

#### REQUIREMENT :

This facility is the only means to support 1.1 low smoke/minimum smoke rocket motors in the north plant.

#### **CURRENT SITUATION:**

Solid rocket motors are being manufactured in modified buildings designed for artillery shell loading during 1938 to 1942 (1.3 hazard class propellants). 1.1 propellants are more demanding in safety requirements and are not compatible with 1.3 propellants. Continued impacts of safety constraints have made work arounds for 1.1 propellants unfeasible.

#### IMPACT IF NOT PROVIDED:

Safety requirements cannot be met for small rocket motors.

THOMAS D. REESE Major General, USA Commanding

ESTIMATED CONSTRUCTION START:	APRIL	1988	INDEX: 1575
ESTIMATED MIDPOINT OF CONSTRUCTION:	OCTOBER	1988	INDEX: 1605
ESTIMATED CONSTRUCTION COMPLETION:	APRIL	1989	INDEX: 1623

1.	COMPONENT	T	<del></del>	2. DATE
	ARMY	FY 1988MILITARY CONSTRUCTION PROJECT DA	ATA	JAN 1987
	· · · -	ON AND LOCATION		-
	DSTONE ARS abama	ENAL		
	PROJECT TIT	LE	5. P	ROJECT NUMBER
	dernizatio	n Finishing (S)		TEMP 2209-2
Sill d	all Motor	rinishing (5)		2209-2
		SUPPLEMENTAL DATA		
Α.	ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		150 (\$000)
В.	•	ADDITIONAL PERSONNEL NECESSARY TO CARRY UNCTION OF THE PROPOSED FACILITY		4
c.	ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
		ED FACILITY		3750 (\$000)
D.	THE EXIST	LIFE-CYCLE COST TO OPERATE AND MAINTAIN ING FACILITY IF NEW FACILITY IS A		
	REPLACEME	NT		(\$000)
E.	PLANNING	AND DESIGN DATA (ESTIMATE)		
	1. STATUS	·		
		DATE DESIGN STARTED		JUL 84 100
		PERCENT COMPLETE AS OF SANDARI 13 1967		100
	d.	DATE DESIGN COMPLETED		DEC 86
	2. BASIS			
		NDARD OR DEFINITIVE DESIGN YES N RE DESIGN WAS MOST RECENTLY USED:	0 X	
	- ,	TOTAL - \$000)		
		DUCTION OF PLANS AND SPECS		
		OTHER DESIGN COSTS		
		TRACT		
	e. IN	HOUSE		
	4. CONSTR	UCTION START DATE (PLANNED)		APR 88

# DEPARTMENT OF THE ARMY JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1988/1989

## FY 1988 - PRODUCTION BASE SUPPORT

APPROPRIATION: Procurement of Weapons and Tracked Combat Vehicles, Army

Activity 1 - Tracked Combat Vehicles

Installation	Project No.	Project Title	Cost Estimate (\$000)	Page No.
Mainz Germany	882006	Facilitization at Main Army Depot	1.050	10
	FY 1989 - PRODU	CTION BASE SUPPORT		
Mainz Germany	882006	Facilitization at Main Army Depot	5.300	13
Lima Army Tank Plant	8 <del>92006</del>	PSER Constroution	6.000	17

1. COMPONENT	Y 19 88 MILITARY	CONSTRUCT	ION PI	ROJECT DA	Z. DATE	4003
APMY	ARMY					Jag 1987
<b>NSTALLATION AND L</b> MAINZ	OCATION	4. PR	DJECT TI	TLE		
Germany			Facili	tization a	at Mainz	Army Dano
ROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT N			T COST (SOO	
			EMP			
	000 00		882006		1	,050
		. COST ESTIMATI			UNIT	cost
	ITEM		U/M	QUANTITY	COST	(\$000)
PRIMARY FACILI Main Steam &	TY Condensate Lines	(Gonsenheim)	LF	2,080	453.85	944 944)
SUPPORT FACILI	TIES	<u> </u>				<u> </u>
UBTOTAL		, ,		<del></del>		944
	RCENT ( 5.00%)					47
TOTAL CONTRACT	NSPECT & OVHD ( 6.5	50%)				991
TOTAL REQUEST	MSTLOT & OVID ( 0.)	)0%)	1 1			64 1,055
OTAL REQUEST	(ROUNDED)					1,050
(NSTALLED EQUI)	PMENT-OTHER APPROP					0)
escription of Proposed	Construction		ئىل		<u> </u>	
installation of	f steam and condens	aka maim 1i:	+-	ima11		, e
ground, instal?	l steam and condens lation of the pipin	eace main ill	ratio	n of areas	includir	1 O I 10
by-works.	papa.	.,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	or areas	THE Tua II	<b>ن</b> ة
II. REQUIREMENT	T: A	DEQUATE:	····	SUB	STD:	<del></del>
ROJECT :						
This project wi	f new steam and con ill preclude the ne cilities not locate	ed to purch	ase re	placement	small ind	lity. Iividual
REQUIREMENT :						
ecause some fa	cilities at the Go	nconhoim cit	e are	not locat	ed next t	0
existing steam	lines, they requir existing boiler pla	e small ind:	lvidua	l boilers	for steam	ı

1. COMPONENT			=			2. DAT	E		
ARMY	FY 1988 MILITARY CON	ISTRUCTION	ON PROJE	CT DATA	.	زل	1387		
	N AND LOCATION								
MAINZ									
Germany			- /-						
4. PROJECT TITL	E				5. PR		NUMBER		
m 111.1						TEMP			
Facilitizatio	n at Mainz Army Depot					G882	006		
boilers for s most economic IMPACT IF NOT Failure to pro	t located near to exis team supply. Connectio ally favorable solutio PROVIDED: ovide this project wil am to facilities not l	on to the	existing e a large	centra	l boi cycle	ler i	s the		
	WILLIAM S. LITTLEFIELD COL Commander								
ESTIMATED MID	STRUCTION START: POINT OF CONSTRUCTION: STRUCTION COMPLETION:	•	APRIL OCTOBER APRIL	1988 1988 1989	IN	DEX: DEX: DEX:	1605		

1. COMPONENT		2. DATE
	FY 19 <sup>88</sup> MILITARY CONSTRUCTION PROJECT DAT	A JAN 1987
ARMY		Viii
MAINZ	ON AND LOCATION	
Germany		F 000 IFOT WILLDED
4. PROJECT TIT		5. PROJECT NUMBER TEMP
Facilitizati	on at Mainz Army Depot	G882006
	SUPPLEMENTAL DATA	
A. ESTIMATEI	ANNUAL COST TO OPERATE PROPOSED FACILITY	(\$000)
	ADDITIONAL PERSONNEL NECESSARY TO CARRY UNCTION OF THE PROPOSED FACILITY	
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN	(PEOPLE)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN	(\$000)
THE EXIST	TING FACILITY IF NEW FACILITY IS A	
		(\$000)
	AND DESIGN DATA (ESTIMATE)	
1. STATUS		
1	DATE DESIGN STARTED	sep 86
	PERCENT COMPLETE AS OF JANUARY 15 1987	35
	PERCENT COMPLETE AS OF OCTOBER 1 1987	100
d.	DATE DESIGN COMPLETED	oct 87
	ANDARD OR DEFINITIVE DESIGN YES X NO ERE DESIGN WAS MOST RECENTLY USED:	
3. COST (	TOTAL - \$000)	•
1	DDUCTION OF PLANS AND SPECS	
	OTHER DESIGN COSTS	
	TAL COST (c) = (a)+(b) OR (d)+(e)	
4	VTRACT	
e. IN	HOUSE	
4. CONSTI	RUCTION START DATE (PLANNED)	apr 88

1. COMPONENT ARMY	<b>FY 19</b> 89	MILITARY C	ONSTR	UCTIC	N PF	ROJECT DAT	2. DATE	JAN 1987
3. INSTALLATION AP	ND LOCATION			. PROJE			<del></del>	
Germany			i	Fa	cili	tization a	et Mainz	Army Depot
5. PROGRAM ELEME	NT 6. CAT	EGORY CODE	7. PROJE	CT NUM		8. PROJEC	T COST (\$00	0)
		000 00		G89	2006		5	300
		9. 0	OST ESTIN	ATES				
	•	TEM	·		U/M	QUANTITY	COST	(\$000)
Light Veh	ce Preparat Inspection Acid Storag	tion Complex n Facility ( ge Building (	Mombach	)	SF SF SF	26,550 9,920 11,828	119.20( 92.44( 54.13(	917)
SUBTOTAL CONTINGENCY TOTAL CONTR SUPERVISION TOTAL REQUE TOTAL REQUE INSTALLED E	ACT COST , INSPECT & ST ST (ROUNDEI	OVHD ( 6.50	%)					4,722 236 4,958 322 5,280 5,300

#### 10. Description of Proposed Construction

The primary facility to support combat vehicle maintenance at MZAD will require dismantling of existing buildings and erection of new facilities. Basic construction will be of reinforced concrete skeleton and in all cases will be site adapted to existing facilities. In addition, the project will include required utility services, emergency lighting, water purification treatment, compressed air, fire alarm and extinguishing system, partition walls and roof modifications. The hardstands and foundations will be of reinforced concrete.

REQUIREMENT: ADEQUATE: SUBSTD:

As the Army's Force Modernization Program continues to be implemented throughout USAREUR, the workload in depot level maintenance will also increase. This is due to the increased sophistication of the new systems, the increased equipment density within the Theater, the numerous items displaced to War Reserve or POMCUS status, and conversion to new equipment configurations. This will occur in all commodity areas. For most

1. COMPONENT	FY 1989MILITARY CONSTRUCTION PROJECT DATA	2. DATE JAN 1987
3. INSTALLATIO MAINZ Germany	N AND LOCATION	
4. PROJECT TITL  Facilitization	E n at Mainz Army Depot	5. PROJECT NUMBER LEMP G892006

#### REQUIREMENT:

(CONT)..

commodities, shipment to CONUS for repair is extremely costly. This is particularly true of Combat Vehicles which are bulky and heavy. In addition, CONUS repair requires that additional items, either end items or secondary items, be procured to increase the repair cycle float by the amount of the turn around required. The most economical approach to accomplish the expanding depot level workload for combat vehicles in USAREUR (and meet AMC's concept for depot level maintenance support in Europe) is to facilitize the MZAD site, thereby providing sufficient space to overhaul/repair combat vehicles.

#### CURRENT SITUATION:

The Mainz Army Depot is a very physically constrained facility. The workload required for the repair/overhaul of new systems cannot be met without modernizing the existing depot by replacing existing temporary facilities with permanent structures and modernizing and expanding support facilities. Mainz is tasked with maintaining, at depot level, Army Combat/Tactical vehicles, missiles and Communication and Electronics in Europe. The only reasonable alternatives to utilizing Mainz is to transfer all repairable combat vehicles and components of vehicles in Europe to a CONUS depot or contractor for the repair/overhaul. These alternatives and the extremely costly maintenance float requirement for combat vehicles and components would cause the US Government to lose all benefits to be gained from existing facilities and IPE at MZAD in relation to the combat vehicle fleet.

#### IMPACT IF NOT PROVIDED:

Should this project not be approved, Mainz would be unable to satisfy the repair/overhaul requirements. Failure to provide for the OCONUS maintenance of the USAREUR combat vehicle fleet will result in a significant degradation in the combat readiness of USAREUR or require costly second destination transportation of vehicles and components and necessitates having an extensive maintenance float in Europe. This facility project is necessary to meet an imminent demand for repair/overhaul capability. Delay of the project

1. COMPONENT					2. DAT	E	
ARMY	FY 1989 MILITARY CONS	STRUCTIO	ON PROJEC	T DATA	ال	AN 1987	
3. INSTALLATION	N AND LOCATION						
Germany							
4. PROJECT TITLE	E				5. PROJECT		
Facilitizatio	n at Mainz Army Depot					2006	
will require that interim inefficient (and therefore costly) means be employed to attempt to satisfy the repair/overhaul requirements.							
WILLIAM S. LITTLEFIELD  COL  Commander							
ESTIMATED MID	NSTRUCTION START: DPOINT OF CONSTRUCTION: NSTRUCTION COMPLETION:	;	APRIL OCTOBER APRIL	1990 1990 1991	INDEX: INDEX: INDEX:	1690	

1. (	. COMPONENT			2. DATE
	ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT I	DATA	JAN 1987
MA)		N AND LOCATION		
	PROJECT TITL	E	5.	PROJECT NUMBER
Fac	:ilitizatio	n at Mainz Army Depot		TEMP G892006
		SUPPLEMENTAL DATA		
Δ	FCTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		
и.	LOTIMATED	MANORE GOOT TO OPERATE PROPUSED FACILITY		(\$000)
В.		ADDITIONAL PERSONNEL NECESSARY TO CARRY		
	OUL THE FU	NCTION OF THE PROPOSED FACILITY		(PEOPLE)
c.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN		
l	THE DESIRE	D FACILITY		(\$000)
		LIFE-CYCLE COST TO OPERATE AND MAINTAIN		,
•		NG FACILITY IF NEW FACILITY IS A		
	VINER			(\$000)
F	PT.ANNTNO A	ND DESIGN DATA (ESTIMATE)		
		DOUGH PAIN (BOTTABLE)		
	1. STATUS	DATE DESIGN STARTED		DEC 86
		PERCENT COMPLETE AS OF JANUARY 15 1988.		100
	c •	PERCENT COMPLETE AS OF OCTOBER 1 1988		100
	d.	DATE DESIGN COMPLETED		DEC 87
	2. BASIS		•	
		DARD OR DEFINITIVE DESIGN YES E DESIGN WAS MOST RECENTLY USED:	NO	
	J. HIEK	USUNUUS AND		
	3. ርበፍጥ (m	OTAL - \$000)		
		UCTION OF PLANS AND SPECS		
		OTHER DESIGN COSTS		
		L COST (c) = (a)+(b) OR (d)+(e)		
		OUSE		
	4. CONSTRU	CTION START DATE (PLANNED)		apr 90
1				

1. COMPONENT	<b>FY 19</b> 89	MILITARY	JEH 1987		
J. INSTALLATION A Lima Army T. Ohio	ND LOCATION ank Plant		4. PROJECT T	ITLE nstruction	
6. PROGRAM ELEME	NT 6. CAT	EGORY CODE	7. PROJECT NUMBER 6037 893067	6,000	
		9	COST ESTIMATES		**************************************

9. COST ESTIMATES						
ITEM	U/M	QUANTITY	COST	(\$000)		
PRIMARY FACILITY				5,413		
l. Water Main System Upgrade	LS			(1,339)		
2. Lighting System Upgrade				(1,900)		
3. Addition to Bldg. 317	SF	21,800	99.72	(2,174)		
SUPPORT FACILITIES						
SUBTOTAL				5,413		
CONTINGENCY PERCENT (5.0%)				270		
TOTAL CONTRACT COST				5,683		
SIOH (5.6%) TOTAL REQUEST TOTAL REQUEST ROUNDED				313 6,001 6,000		

#### 10. Description of Proposed Construction

Upgrades water main system capacity by replacement of inadequate piping and fixtures, separating domestic and fire water supply systems, and expanding existing water system to provide fire protection to production support buildings throughout the installation.

Upgrades lighting system in the main production building by providing emergency lighting, replacement of existing light fixtures, and corrects electrical power factor.

1. COMPONENT

## FY 1989 MILITARY CONSTRUCTION PROJECT DATA

2. DATE

JAN **1987** 

ARMY

3. INSTALLATION AND LOCATION

Lima Army Tank Plant Ohio

4. PROJECT TITLE

PSER Construction

5. PROJECT NUMBER

Provides addition to existing building #317. New construction will be insulated metal roof and walls and reinforced concrete floor. Requires heating and ventilation systems, exhaust system, electrical, plumbing, telephone, and fire sprinkler systems. Includes vehicle wash booth, overhead cranes, and locomotive service pit.

#### II. REQUIREMENT

Project: Upgrades water main system and electrical lighting to correct OSHA, NFPA, and DOD Safety deficiencies. Completes plant fire loop to provide 15) p.s.i. for fire protection. Improves lighting in production area and provides emergency lighting for egress from production building during power failure. Consolidates maintenance area for plant support equipment and upgrades battery and corrosives storage area.

#### Requirement:

space. Water system has not expanded with the rest of the facility and is in violation of NFPA codes which specify that domestic and fire water systems be separate. Electrical lighting provides inadequate illumination to the production floor with no means of emergency lighting to illuminate egress routes from the production area. Space to maintain plant support equipment and vehicles is inadequate. These vehicles include forklifts, diesel and gasoline powered trucks, and a locomotive. Batteries are maintained for rebuild and/or recharge and exchange for electrical powered vehicles.

Corrosives are stored for maintenance operations.

#### Current Situation:

The current water system does not meet NFPA codes. Piping and fixtures are inadequate to meet fire protection requirements. Domestic and fire water systems are combined and are "dead end" systems with only a single source of water. The electrical lighting system requires maintenance and relamping to provide adequate light to the production floor. No emergency

1. COMPONENT
ARMY

FY 1989MILITARY CONSTRUCTION PROJECT DATA
JAN 1987

3. INSTALLATION AND LOCATION
Lima Army Tank Plant Ohio

4. PROJECT TITLE
PSER Construction

2. DATE
JAN 1987

5. PROJECT NUMBER
8930176037

lighting exists. Maintenance for plant vehicles is done at various locations throughout the plant and outside on hardstands. battery storage and corrosive storage areas are in violation of OSHA, NFPA, and DOD Safety codes.

Impact If Not Provided:

Plant will remain in violation of OSHA, NFPA, and DOD Safety codes. The water system will require extensive maintenance to remain useful. Water for fire protection will not be available at sufficient pressures. Lighting will remain inadequate.

ELTON J. MINNEY LTC, OrdC Commanding

1. COMPONENT	<del></del>		2. DATE
ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT D	DATA	JAN 1987
3. INSTALLATION	AND LOCATION		
Lima Army Tar	nk Plant Ohio		
4. PROJECT TITLE		5. P	ROJECT NUMBER
PSER Construc	ction		47 <b>6-2</b> 7
		<u>_</u> _	
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		(\$000)
	ADDITIONAL PERSONNEL NECESSARY TO CARRY		( \$000)
OUT THE FU	INCTION OF THE PROPOSED FACILITY		(PEOPLE)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		( 201 111/
THE DESIRE	D FACILITY		(\$000)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN NG FACILITY IF NEW FACILITY IS A		(+000)
	T		
			(\$000)
E. PLANNING A	ND DESIGN DATA (ESTIMATE)		
1. STATUS			
	DATE DESIGN STARTED		DEC 86
	PERCENT COMPLETE AS OF JANUARY 15 1988		100
	PERCENT COMPLETE AS OF OCTOBER 1 1988  DATE DESIGN COMPLETED		100 DEC 87
	DESTRUCTION CONTRECTED ************************************		DEC 01
2. BASIS	DAPD OF DESIGNATION DESIGN	NO	
	DARD OR DEFINITIVE DESIGN YES LE DESIGN WAS MOST RECENTLY USED:	NO	
	OTAL - \$000)		
	OUCTION OF PLANS AND SPECS		
	OTHER DESIGN COSTS		
	L COST (c) = $(a)+(b)$ OR $(d)+(e)$		
	RACT		
			APR 8 <b>9</b>
4. CONSTRU	CTION START DATE (PLANNED)		ALK 07

# DEPARTMENT OF THE ARMY JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1988/1989

## FY 1988 - PRODUCTION BASE SUPPORT

APPROPRIATION: Procurement of Ammunition, Army

ACTIVITY 2 - Production Base Support

Army Ammunition Installation	Project No.	Project Title	Cost Estimate (\$000)	Page No.
Louisiana Army PT, Louisiana	5885314-13	Replacement Repl Bridge & Trestles	1.250	23
Kansas Army Plant, Kansas	5885329-21	New 700 Line Steam Gen Plant	<b>.</b> 560	26
Louisiana Army PT, Louisiana	5882800-18	Intrusion Alarm System	1.900	29
Holston Army PT, Tennessee	5885328-17	Addition Overfire Systems	.800	33
Indiana PT, Indiana	5885330-15	Additon Shiphse/ Roads PHS IV	.440	36
Holston Army PT, Tennessee	5882439D	Modernization MOD Bldg N-3 for A-5 Drying	1.700	41
Louisiana Army PT, Louisiana	5885314-21	Replacement Repl Barricades, Area D	.590	44
Milan Army Plant, Tennessee	588317-19	Cond & Stg Fac Area ZZ	.540	47
Radford Army PT, Virginia	5885326-16	Replacement Replacement (5) Barricades	1.000	50
Radford Army PT, Virginia	5882700-2	Replacement Replace Barricades at Explosive Op	.540	53
Twin Cities Army PT, Minnesota	5882800-8	Modernization Igloo Storage	2.600	56

# DEPARTMENT OF THE ARMY JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1988/1989

# FY 1988 - PRODUCTION BASE SUPPORT (Cont'd)

## APPROPRIATION: Procurement of Ammunition, Army

## ACTIVITY 2 - Production Base Support

Army Ammunition Installation	Project No.	Project Title	Cost Estimate (\$000)	Page
Lone Star Army PT, Texas		Modernization Chem Lab Rehabilitation	•550	59
Ravenna Army PT, Ohio		Modernization Intru Alarm Sys/ Locks/Hasps	2.600	64
Votunteer Army PT, Tennessee	5882800	Modernization Security Fencing	.740	68
Lake City Army Ammo Plant Missouri	2800-07	Security Improvements	1.150	72

1. COMPONENT ARMY	FY 1	9 88 MILITARY C	ONST	RUCTION	PR	OJECT DA	2. DA1		N 1987
		ATION AMMUNITION PT	-	1	LAC	CEMENT	bilGrou		
Louisiana PROGRAM ELEME	NT.	IS. CATEGORY CODE	In 100			BRIDGE & T			
PROGRAM ELEME	14 1	6. CATEGORY CODE	/. PHO.	IECT NUMBE TEMP		8. PROJEC	i COST (\$	0001	
<del></del>		860 30		5314	-13	3		1,	250
<del></del>		9. C	OST EST	IMATES			T (N)		COST
		ITEM		U/	M	QUANTITY	COST		(\$000)
PRIMARY FAC	CILITY				7		_	╁	1,082
BRIDGES &	TRES	STLES			LS			(	1,082
SUPPORT FAC	CILIT	ES							
TOTAL CONTI SUPERVISION TOTAL REQUE TOTAL REQUE	RACT ( N, INS EST EST (F	SPECT & OVHD ( 5.50	1%)					(	1,082 108 1,190 65 1,255 1,250
). Description of Prop	osed Cor	nstruction							<del></del>
concrete bo	oxed o	oden highway bridge ulverts as appropr GHO capacity rating	iate.	Bridges					

will meet AASHO capacity rating of HS 20-44. PReplace eight rawooden railroad trestles. New trestles will be steel or concrete as appropriate. Trestles will meet COOPER E45 rating per TM 5-370.

11.	REQUIREMENT:	25	ΜI	ADEQUATE:	6	ΜI	SUBSTD:	19	MI
PRO.	JECT :								

THIS PROJECT IS TO PROVIDE REPLACEMENT FOR FOUR BRIDGES AND EIGHT TRESTLES INCLUDING HEADWALLS, WING WALLS, AND APPROACH AS NECESSARY TO PROVIDE STRUCTURES WITH APPROPRIATE LOAD CARRYING CAPABILITY.

1. COMPONENT	FY 1988 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 1987
3. INSTALLATION LOUISIANA ARMY Louisiana	N AND LOCATION Y AMMUNITION PT	
4. PROJECT THE REPLACEMENT REPL BRIDGE &	gilization Group I TRESTLES	5. PROJECT NUMBER TEMP 5314-13

#### REQUIREMENT :

EXISTING BRIDGES AND TRESTLES ARE WOOD STRUCTURES OF 1941-42 VINTAGE. THESE UNITS ARE DECAYING. INSPECTIONS BY THE CONSULTING FIRM OF AILLET, FENNER, JOLLY AND MCCLELLAND, INC AND FESA SHOW THAT THERE IS ADVANCED STAGES OF DECAY IN THE MAIN STRUCTURE AND THE PILING.

CURRENT SITUATION:

LOAD CARRYING CAPACITY ON EXISTING STRUCTURES HAS BEEN REDUCED. EACH STRUCTURE WILL BE REVIEWED ANNUALLY AND LOAD CARRYING CAPACITY ADJUSTED ACCORDING TO THE SAFE LOADING CAPACITY.

IMPACT IF NOT PROVIDED:

FAILURE TO APPROVE THIS PROJECT WILL RESULT IN BRIDGES AND TRESTLES FAILING TO THE POINT THEY ARE UNSAFE TO CROSS. IF A BRIDGE OR TRESTLE FAILS IT MAY ELIMINATE ACCESS TO THE SECTION OF THE INSTALLATION WHICH THAT STRUCTURE SERVES.

ADDITIONAL:

AN ECONOMIC ANALYSIS FORMAT B HAS BEEN SUBMITTED.

GARY F. ANDREW LTC, OrdC COMMANDING

ESTIMATED CONSTRUCTION START: MAY 1988 INDEX: 1580 ESTIMATED MIDPOINT OF CONSTRUCTION: MAY 1989 INDEX: 1627 ESTIMATED CONSTRUCTION COMPLETION: JUNE 1990 INDEX: 1674

1.	COMPONENT	==		2. DATE 1007
	ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT D	ATA	2. DATE 1987
	INSTALLATIO	AND LOCATION		<u> </u>
	UISIANA ARM uisiana	Y AMMUNITION PT		
4.1	PROJECT TITE	bilization Group l	5. F	ROJECT NUMBER
	PLACEMENT PL BRIDGE &	TRESTLES		TEMP 5314-13
		SUPPLEMENTAL DATA		
Α.	ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		4,000 (\$000)
В.		ADDITIONAL PERSONNEL NECESSARY TO CARRY NCTION OF THE PROPOSED FACILITY		
c.	ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
		D FACILITY		\$100,000 (\$000)
D.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN NG FACILITY IF NEW FACILITY IS A		
	REPLACEMEN	T		(\$000)
ε.	PLANNING A	ND DESIGN DATA (ESTIMATE)		
	l. STATUS			
		DATE DESIGN STARTED		010885 100
	C •	PERCENT COMPLETE AS OF OCTOBER 1 1987		100
	d.	DATE DESIGN COMPLETED		301287
	2. BASIS	DADD OF DECINITIVE DECICE VEC	NO	
	b. WHER	DARD OR DEFINITIVE DESIGN YES E DESIGN WAS MOST RECENTLY USED: USED	NO	:
	- ,	OTAL - \$000) UCTION OF PLANS AND SPECS		•
	b. ALL	OTHER DESIGN COSTS		
		L COST (c) = (a)+(b) OR (d)+(e)		
		OUSE		
	4. CONSTRU	CTION START DATE (PLANNED)		300388

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1. COMPONENT ARMY	FY 1	19 88 MILITARY	CONSTR	IUCTIO	N PR	OJECT DA	TA 2. DAT	e Na(	1987
3. INSTALLATION A	ND LOC	ATION		4. PROJEC	CT TIT	LE			<del></del>
KANSAS ARM	Y AMM	UNITION PLANT							
Kansas				NE	W 70	O LINE ST	EAM GEN	PLT	
5. PROGRAM ELEME	NT	6. CATEGORY CODE	7. PROJE	CT NUME	ER	8. PROJEC	CT COST (SC	100)	
		201.00		TEM					
		821 22	COST ESTI	532	921			56	٥
		ITEM	. 0001 2311		U/M I	QUANTITY	UNIT	<b></b> -	COST
						COANTITY	COST	}	\$000)
PRIMARY FAC									505
Steam Ger	nerati	ing Plant		1	LS			(	505)
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				]					
SUPPORT FAC	ILITI	ES			+			<del>                                     </del>	
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SUBTOTAL		<del></del>							
- · · · · · <del>-</del>	DE D C	ENT ( 5.00%)			1				505
TOTAL CONTR				}	}			}	25
		PECT & OVHD ( 5.5	50%)						530
TOTAL REQUE			) ( · o )						29
TOTAL REQUE		OUNDED)							559 560
		ENT-OTHER APPROP		İ				r	560 0)
								ĺ	0 )
10. Description of Prop	osed Co	nstruction						<b>'</b>	
Constant									
related equ	new r	metal boiler hous	e in 700	) Area	c om p	lete with	new bo	ilers	and
reracca equ	r pinen	· •							
11. REQUIRE	MENT:	27,000,000 MB A	DEQUATE:			MB SUB	STD:		MB
PROJECT:			•			500	J.J.	U	ID
Construct ne	ew boi	iler house, 700 A	rea.						
proutpeus:-						•			
REQUIREMENT									
inis project	ls t	required to repla	ce the o	ld 194	1-42	steam ge	nerating	g sys	tem
producing a	or ur	igh energy, multi	ple pass	, steam	m ge	nerators	capable	o f	
ancillary ec	LULAI Juinma	of 27,000,000 B	iv per h	our. P	roje	ct to inc	lude al	l	
and I tally el	1 ar hue	. II C +							

1. COMPONENT  ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT DATA	2. DATE JAN 1987
3. INSTALLATION KANSAS ARMY AN Kansas	NAND LOCATION MUNITION PLANT	
4. PROJECT TITL	E	5. PROJECT NUMBER TEMP
NEW 700 LINE	STEAM GEN PLT	532921

#### **CURRENT SITUATION:**

This old boiler house and steam generating equipment is deteriorated to a condition which is no longer feasible to repair.

#### IMPACT IF NOT PROVIDED:

If not replaced the aging system will continue to require prohibitive maintenance costs to remain in service. System failure results in insufficient process steam to sustain production.

/S/ CHARLES T. WALLSCHLAEGER
CHARLES T. WALLSCHLAEGER
LTC, OrdC
Commanding

ESTIMATED CONSTRUCTION START: APRIL 1988 INDEX: 1575
ESTIMATED MIDPOINT OF CONSTRUCTION: OCTOBER 1988 INDEX: 1605
ESTIMATED CONSTRUCTION COMPLETION: APRIL 1989 INDEX: 1623

1. COMPONENT		2. DATE					
ARMY	FY 1988MILITARY CONSTRUCTION PROJECT DATA						
	N AND LOCATION						
	MMUNITION PLANT	'					
Kansas 4. PROJECT TITL	E	5. PROJECT NUMBER					
4. PROJECT 111E	<b>5</b>	TEMP					
NEW 700 LINE	STEAM GEN PLT	532921					
	SUPPLEMENTAL DATA						
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY	(0000)					
R MIMBED OF	ADDITIONAL PERSONNEL NECESSARY TO CARRY	(\$000)					
	NCTION OF THE PROPOSED FACILITY						
301 1		(PEOPLE)					
C. ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN						
THE DESIRE	D FACILITY	(2222)					
D. ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN	(\$000)					
	NG FACILITY IF NEW FACILITY IS A						
REPLACEMEN	T						
		(\$000)					
E. PLANNING A	ND DESIGN DATA (ESTIMATE)						
1. STATUS							
а.	DATE DESIGN STARTED	Mar 86					
	PERCENT COMPLETE AS OF JANUARY 15 1987	70					
	PERCENT COMPLETE AS OF OCTOBER 1 1987  DATE DESIGN COMPLETED	100 Mar 87					
a.	DATE DESIGN COMPLETED	Mai 07					
2. BASIS							
	DARD OR DEFINITIVE DESIGN YES NO	)					
b. WHER	E DESIGN WAS MOST RECENTLY USED:						
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	OTAL - \$000)						
	OUCTION OF PLANS AND SPECS						
	OTHER DESIGN COSTS						
	RACT						
	OUSE						
		. 00					
4. CONSTRU	CTION START DATE (PLANNED)	Apr 88					

ARMY	FY 19	88 MILITARY	ONSTRUC	TION PR	OJECT DA	TA 2. DAT		1957
STALLATION A			4. PI	ROJECT TI	TLE MO	bilGroup	5 1	
	RMY A	AMUNITION PT	· [			C		
Louisiana	MT .	6. CATEGORY CODE	7. PROJECT		ion Alarm	T COST (SO		
TOGTIAM ELLME		e. carregon r code	J. PROJECT	TEMP	a. Phose	, i cosi wo	•	
		880_40	ļ	2800-11	3		1.90	00
		9. (	COST ESTIMAT	res				
		ITEM		UVM	QUANTITY	COST		(\$600) COST
PRIMARY FAC		ction System, Are	a	вх	49	3383	(	1,658 1,658
SUPPORT FAC	CILITI	ES						
TOTAL CONTI SUPERVISION TOTAL REQUE	RACT C N, INS EST	PECT & OVHD ( 5.5	0%)					1,658 160 1,824 100 1,924
TOTAL REQUE		OUNDED) ENT-OTHER APPROP					(	1,90
Description of Prop	osed Con	itruction		11				<u>-</u>
L-3. Each meadquarter fiber option	nagazi rs by c cabl	provide intrusion ne will be equipp multiplexed equip e. Primary electr igloo.	ed to pro ment whic	vide a h will	signal to monitor ov	guard er hard	wi re	and
provided co								

detectors if not under continuous surveillance by approved means. This project upgrades security protection for sensitive munitions storage. This

1. COMPONENT	FY 1988MILITARY CONSTRUCTION PROJECT DATA	2. DATE JAN 1987
ARMY	•	<b>J.</b>
3. INSTALLATIO	N AND LOCATION	
LOUISIANA ARM	Y AMMUNITION PT	
Louisiana		
4. PROJECT TITE	bilization Group 1	5. PROJECT NUMBER
	-	TEMP
Intrusion Ala	rm System	2800-1B
		<u> </u>

#### REQUIREMENT :

(CONT)..

project is required to prevent unauthorized entry of individuals in the sensitive storage areas for purpose of theft, sabotage, or other similar criminal acts.

**CURRENT SITUATION:** 

Current need is being met by alternative measures allowed by AR 190-11.

SECURITY IS CURRENTLY ACCOMPLISHED BY MEASURES REQUIRED IN THE ABSENCE OF AN IDS SYSTEM.

CURRENTLY, A GUARD CHECKS EACH IGLOO; HOWEVER, APPROXIMATELY TWO HOURS IS REQUIRED TO MAKE A FULL INSPECTION. THIS MEANS THAT AN INTRUSION CAN GO UNDETECTED FOR APPROXIMATELY 2 HRS. CURRENT OPERATION IS UNDER WAIVER PWS-SMCLA-1-84.

IMPACT IF NOT PROVIDED:

If this project is not approved, compliance with AR 190-11 cannot be achieved.

ADDITIONAL:

SPECIFIC MOBILIZATION REQUIREMENT:

THIS SCOPE OF WORK IS A CURRENT REQUIREMENT TO COMPLY WITH REFERENCES IN PARA 11.M

AN EXEMPTION TO THE REQUIREMENTS OF AN ECONOMIC ANALYSIS IS REQUESTED IN ACCORDANCE WITH PROVISIONS OF AR 11-28, PARA 1-3D(3). REGULATIONS WHICH SUPPORT THIS REQUEST ARE LISTED IN PARA 11.M.

1. COMPONENT						2. DAT	E
	FY 19 88 MILITARY CON	STRUCTI	ON PROJE	T DATA			AN 1987
ARMY							
	N AND LOCATION IY AMMUNITION PT						: 1 <del>957</del>
Louisiana							
4. PROJECT TIME	pilization Group l				5. PI	ROJECT	NUMBER
						TEM	?
Intrusion Ala	rm System					2.800	1-1 B
	NG OF THESE FACILITIES COPER IDS FACILITIES MI		MPANY THE			MENT;	
	,	GARY F.	ANDREW				
		LTC, ORI					
		COMMAND	LNG				
ESTIMATED CON	STRUCTION START:		APRIL	1988	I	NDEX:	1575
ESTIMATED MID	POINT OF CONSTRUCTION:		OCTOBER	1988	I	NDEX:	1605

APRIL 1989

ESTIMATED CONSTRUCTION COMPLETION:

INDEX: 1623

1. COMPONENT		2. DATE
ARMY	FY 1988MILITARY CONSTRUCTION PROJECT DA	TA 1987
	NAND LOCATION Y AMMUNITION PT	
Louisiana ARM	I AMMUNITION PI	
	Dilization Group 1	5. PROJECT NUMBER
		TEMP
Intrusion Ala	rm System	2800-1B
	-	
	SUPPLEMENTAL DATA	
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY	
		(\$000)
	ADDITIONAL PERSONNEL NECESSARY TO CARRY NCTION OF THE PROPOSED FACILITY	
C FORTMARCS	LIBE CUCLE COST TO OBERATE AND MAXNELLY	(PEOPLE)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN D FACILITY	
THE BESTRE	D (NOTELLIAMINA)	(\$000)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN NG FACILITY IF NEW FACILITY IS A	
REPLACEMEN	T	(\$000)
		(
E. PLANNING A	ND DESIGN DATA (ESTIMATE)	
l. STATUS		
	DATE DESIGN STARTED	OCT 86
	PERCENT COMPLETE AS OF JANUARY 15 1987	100
	PERCENT COMPLETE AS OF OCTOBER 1 1987	100
4.	DATE DESIGN COMPLETED	DEC 86
2. BASIS		
	DARD OR DEFINITIVE DESIGN YES NE DESIGN WAS MOST RECENTLY USED:	0 X
a. PROD	OTAL - \$000) UCTION OF PLANS AND SPECS	
	OTHER DESIGN COSTS	
	L COST (c) = (a)+(b) OR (d)+(e) RACT	
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4. CONSTRU	CTION START DATE (PLANNED)	APR 88

1. COMPONENT	FY 1	9 88 MILITARY	CONST	RUCTION	PR	OJECT DA	2. DATE	JAN 1987
HOLSTON ARM			<del></del>	4. PROJEC			<del>_</del>	
Tennessee				0ve	rfi	re Air Sys	tems	
. PROGRAM ELEME	NT	6. CATEGORY CODE	7. PRO	JECT NUMBE		8. PROJEC	T COST (800	0)
		821 10		TEMP 5328				800
		9.	COST ES	TIMATES				
		ITEM		U	/M	QUANTITY	COST	(\$000)
PRIMARY FAC	ILIII				$\dashv$		<del></del>	719
OVERFIRE	AIR S'	YSTEMS			LS		(	719
SUPPORT FAC	ILITI	ES						
SUBTOTAL CONTINGENCY TOTAL CONTR	-	ENT ( 5.00%)						71 9 36 755
TOTAL REQUE	ST ST (R)	PECT & OVHD + 5.60 DUNDED) ENT-OTHER APPROP	0%)				į (	42 797 300 0
O. Description of Prop	occid Con	struction						
A; and on B consist of independent will be ins energy savi	oiler an ain opera talled ng mea only e instal	ire air systems of #4, Building #200 mover (fan), pi ation for each stall on the overfire asure. Because of economical on Boi overfire air of	O, Are ping, oker f air f equip ler #4	ea B (Ste nozzles, lired boi lan of Bo ment pec . This i n of the	am an ler ile uli s t	Plants). He controls A steam r #4, Bldg arities, He last b ston AAP	Each system to provide the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control o	tem will vide driver an gy saving bing fired

1. COMPONENT

FY 1988 MILITARY CONSTRUCTION PROJECT DATA

ARMY

2. DATE

JAN 1987

3. INSTALLATION AND LOCATION

HOLSTON ARMY AMMUNITION PT

Tennessee

4. PROJECT TITLE

Addition

Overfire Air Systems

5. PROJECT NUMBER

TEMP 5328-17

PROJECT :

(CONT)..

This project is to install overfire air systems on four steam boilers at Holston AAP and to add a steam turbine driver on one system.

REQUIREMENT :

This project is required to reduce air pollution (visible stack emissions), to improve efficiency of boiler operations, and in one case (Boiler 4) to save energy.

CURRENT SITUATION:

Presently insufficient overfire air results in incomplete combustion of fuel (coal); thereby increasing fly ash load on electrostatic precipitators that result in air pollution. Based on evaluation of existing overfire air systems the advantages are; reduced carbon carryover; reduced particle dust loading in precipitator hoppers; reduced probability of fire in fly ash silos and increased boiler efficiency.

IMPACT IF NOT PROVIDED:

Particulate emissions will occassionally exceed allowable EPA limitations at loads between 80 and 100 percent boiler capacity. Also, boiler efficiency will not be improved if this project is not funded.

/S/ JAMES F. BALD, JR JAMES F. BALD, JR LTC, OD Commander

ESTIMATED CONSTRUCTION START: APRIL 1988 INDEX: 1575 ESTIMATED MIDPOINT OF CONSTRUCTION: JANUARY 1989 INDEX: 1616 ESTIMATED CONSTRUCTION COMPLETION: OCTOBER 1989 INDEX: 1650

1. COMPONENT			2. DATE 1987
ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT I	DATA	]
	N AND LOCATION		1
	AMMUNITION PT		
Tennessee			
4. PROJECT TITL	E	5. P	ROJECT NUMBER
Addition		}	TEMP
Overfire Air	Systems		5328-17
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		UNK
·			(\$000)
	ADDITIONAL PERSONNEL NECESSARY TO CARRY		
OUT THE FU	NCTION OF THE PROPOSED FACILITY		(250215)
C FSTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
	D FACILITY		UNK
			(\$000)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		
THE EXISTI	NG FACILITY IF NEW FACILITY IS A		
REPLACEMEN	T		NA (ARRA)
			(\$000)
E. PLANNING A	ND DESIGN DATA (ESTIMATE)		
1. STATUS	NATE DECICAL CHARTEN		NOV. 05
	DATE DESIGN STARTED		NOV 85 95
	PERCENT COMPLETE AS OF OCTOBER 1 1987		100
	DATE DESIGN COMPLETED		NOV 86
2. BASIS			
	DARD OR DEFINITIVE DESIGN YES	NO X	
	E DESIGN WAS MOST RECENTLY USED:		
HOL	STON		
3. COST (T	OTAL - \$000)		
	UCTION OF PLANS AND SPECS		
	OTHER DESIGN COSTS		45
	L COST (c) = $(a)+(b)$ OR $(d)+(e)$		45
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e. IN H	OUS E		
4. CONSTRU	CTION START DATE (PLANNED)		APR 88
			- 0.,,

1. COMPONENT ARMY	F <b>Y 19</b> 88	MILITARY C	ONSTR	RUCTIO	ON PF	ROJECT DAT	A J	IN 1987
INSTALLATION AND	LOCATION			4. PROJ	ECT TI	TLE Mob	ilGroup	
INDIANA ARMY	AMMUNITI	ON PT		A	ddit:			•
Indiana				S	hiphs	se/Rds-Phas	e IV	
PROGRAM ELEMENT	6. CAT	EGORY CODE	7. PROJ	ECT NUN	ABER	B. PROJEC	T COST (\$000)	
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	l	421 81	<u> </u>		30/1	5		440
	,====	9. (	OST EST	IMATES				COST
	ı	TEM			U/M	QUANTITY	COST	(\$000)
PRIMARY FACII	ITY		·· · · ·		$\vdash$			396
Shiphse/Rds	s-Phase I	<b>v</b> .			SF	35,369	7.04(	396
•						,,,,,,,		
SUPPORT FACIL	LITIES							
SUBTOTAL						l l		396
CONTINGENCY F		10.00%)				1		20
TOTAL CONTRAC								416
SUPERVISION,		S OVHD ( 5.50	%)				į	23
TOTAL REQUEST							ļ	439
TOTAL REQUEST								440
	IT DM FNT_A	THER APPROP			1		K	16)
INSTALLED EQU	JII MENI-O							

Phase IV will provide for the building of access roads, the purchase of one portable ramp and the reinforcing of floors to sixteen (16) rail shiphouses.

11. REQUIREMENT: 155,283 SF ADEQUATE: 81,712 SF SUBSTD: 73,571 SF PROJECT:

To convert sixteen (16) limited access Rail shiphouses to prime explosive storage locations.

# REQUIREMENT :

Access roads are needed for trailer truck access to existing shiphouses that have only rail access, for end-product storage requirements.

#### CURRENT SITUATION:

Currently, the shiphouses are loaded in two stages. First, by manual transfer of propellant from an intraplant trailer to a rail jitney car and then by manual transfer from the jitney car into the shiphouse. Direct

# 1. COMPONENT ARMY 3. INSTALLATION AND LOCATION INDIANA ARMY AMMUNITION PT Indiana 4. PROJECT TIRESilization Group 1 Addition 2. DATE 1987 5. PROJECT NUMBER TEMP

#### **CURRENT SITUATION:**

Shiphse/Rds-Phase IV

(CONT)..

5330/15

trailer access eliminates one transfer operation. Floor reinforcement is required for forklift transfer of goods.

# IMPACT IF NOT PROVIDED:

Failure to provide this project will necessitate the continued costly manipulating and rewarehousing of explosive inventories. Additional hiring of material handling personnel will be required to keep up with the rate of Class 1.3 storage turnover and more people than necessary will be exposed to hazards of manually handling explosives. Critically needed prime explosive storage space to comply with the ballistic acceptance procedures in SB 742-1, ammunition surveillance procedures for finished goods produce will be lacking at INAAP if this project is not provided.

#### ADDITIONAL :

It is estimated that an annual savings of \$355,972 will be realized. Presently, INAAP has 238 Class 1.3 facilities. Increased production schedules for 1986-88 will require that all 238 Class 1.3 facilities be utilized equally and that an estimated 1,217 load or unload operations will be required annually. Additionally, approximately 150 hours will be saved for quality assurance, content surveillance, inventory check and maintenance personnel.

/s/ TRANNIE W. SANDERSON
TRANNIE W. SANDERSON
LTC, CM
Commanding

ESTIMATED CONSTRUCTION START: APRIL 1988 INDEX: 1575
ESTIMATED MIDPOINT OF CONSTRUCTION: OCTOBER 1988 INDEX: 1605
ESTIMATED CONSTRUCTION COMPLETION: APRIL 1989 INDEX: 1623

				<del></del>
1. CO	OMPONENT	5V 4000 MM 45 A DV 400 M5 DV 45 DV 45 DV		2. DATE 1987
	ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT	DATA	,,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
3. IN		AND LOCATION	<del></del>	
INDI	LANA ARMY	AMMUNITION PT		
Ind i	ana			
		Silization Group 1	Ĭ	5. PROJECT NUMBER
	ition		ĺ	TEMP
Ship	ohse/Rds-Pl	nase IV		5330/15
		SUPPLEMENTAL DATA		
A. E	ESTIMATED .	ANNUAL COST TO OPERATE PROPOSED FACILITY		0
				(\$000)
		ADDITIONAL PERSONNEL NECESSARY TO CARRY		0
C	OUT THE FU	NCTION OF THE PROPOSED FACILITY		O (PEOPLE)
C. F	ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(TEOTEL)
		D FACILITY		0
				(\$000)
		LIFE-CYCLE COST TO OPERATE AND MAINTAIN		
		NG FACILITY IF NEW FACILITY IS A		
R	REPLACEMEN	Г		0 (\$000)
				(3000)
E. P	PLANNING A	ND DESIGN DATA (ESTIMATE)		
١.				
1	. STATUS	DATE DESIGN STARTED		FEB 86
		PERCENT COMPLETE AS OF JANUARY 15 1987		100
		PERCENT COMPLETE AS OF OCTOBER 1 1987		100
	d •	DATE DESIGN COMPLETED		DEC 86
		,		
2	2. BASIS	DARD OF DEFINITIVE DECION VEC	NO.	σ
		DARD OR DEFINITIVE DESIGN YES E DESIGN WAS MOST RECENTLY USED:	NO :	X.
	I NA			
	<del>-</del> - <del>-</del> -			
3		OTAL - \$000)		
		UCTION OF PLANS AND SPECS		21
		OTHER DESIGN COSTS		21 21
		RACT		12
		OUSE		9
4	. CONSTRU	CTION START DATE (PLANNED)		JUN 88

1. COMPONENT 2. DATE FY 1988MILITARY CONSTRUCTION PROJECT DATA JAN 1987 ARMY 3. INSTALLATION AND LOCATION INDIANA ARMY AMMUNITION PT Indiana 4. PROJECT TIMOBilization Group 1 5. PROJECT NUMBER Addition TEMP Shiphse/Rds-Phase IV 5330/15 F. EQUIPMENT ASSOCIATED WITH THIS PROJECT WHICH WILL BE PROVIDED FROM OTHER APPROPRIATIONS EQUIPMENT PROCURING FY OF COST NOMENCLATURE APPROPRIATION APPROP (\$000) Portable Ramps (1) PA, A 4211 88 16.6

1. COMPONENT 2. DATE FY 1988 MILITARY CONSTRUCTION PROJECT DATA JAN 1987 ARMY 3. INSTALLATION AND LOCATION HOLSTON ARMY AMMUNITION PT--11220 Tennessee 4. PROJECT TITLE 5. PROJECT NUMBER Modernization MOD Bldg N-3 for A-5 Drying 0073000 F. EQUIPMENT ASSOCIATED WITH THIS PROJECT WHICH WILL BE PROVIDED FROM OTHER APPROPRIATIONS **EQUIPMENT** PROCURING FY OF COST NOMENCLATURE APPROPRIATION APPROP (\$000) Drying Process PAA 1987 2,900 Equipment

1. COMPONENT	FY 19	88 MILITARY CO	NSTRUCTION	ON PRO	JECT DA	TA 2. DATE	1AN 1987
Tennessee	IMA YMS	AUNITION PT11220	4. PROJ		E ization dg N-3 f	or A-5 D	Prying
5. PROGRAM ELEME	NT	6. CATEGORY CODE	PROJECT NU	MBER	8. PROJEC	T COST (\$0	00)
78011A		226 90		073000			1,700
			ST ESTIMATES	T .		UNIT	COST
		ITEM		U/M	QUANTITY	COST	(\$000)
PRIMARY FA				LS			1,522 ( 1,522
SUPPORT FA		IES aving, Walks		LS			111
TOTAL CON' SUPERVISIO TOTAL REQU TOTAL REQU INSTALLED	TRACT ( ON, INS JEST UEST ( EQUIPS	SPECT & OVHD ( 5.50 ROUNDED) MENT-OTHER APPROP	%)				1,522 76 1,598 89 1,687 1,700 ( 2,900
	nstruc:	tion, alterations, ernize A-5 Drying P		iciliti		utilities	o SF
REQUIREME This proje labor and available	NT : ect is opera for p	required to modern ting space requirem roduction of other ization is needed t	ize an exi ients and m A-Composit	isting nake ex tions a	cisting f and PBX-C	acilitie Ompositi	es ons. The

3. INSTALLATION AND LOCATION	1987
3. INSTALLATION AND LOCATION	
HOLSTON ARMY AMMUNITION PT11220	
Tennessee	
4. PROJECT TITLE 5. PROJECT NUI	<b>MBER</b>
Modernization	
MOD Bldg N-3 for A-5 Drying 0073000	

## CURRENT SITUATION:

Composition A-5 explosive is now dried using drying beds which require extra labor, utilities and facility space. The plant cannot meet the FYDP production requirements without additional, faster drying methods. The FYDP production for Composition A-5 whose would require all existing drying beds.

IMPACT IF NOT PROVIDED:

If this project is not provided, the plant cannot meet the FYDP production requirements and excessive operating costs will continue for the explosive produced using the existing drying bed process.

/S/ JAMES F. BALD, JR JAMES F. BALD, JR LTC, OD Commanding

ESTIMATED CONSTRUCTION START:	JULY	1988	INDEX:	1590
ESTIMATED MIDPOINT OF CONSTRUCTION:	AUGUST	1989	INDEX:	1640
ESTIMATED CONSTRUCTION COMPLETION:	SEPTEMBER	1990	INDEX:	1686

1. COMPONENT	<del></del>		2. DATE
ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT	DATA	J., 7 <b>1987</b>
3. INSTALLATION HOLSTON ARMY	N AND LOCATION AMMUNITION PT11220		
Tennessee 4. PROJECT TITL	E	5.	PROJECT NUMBER
Modernization   MOD Bldg N-3	for A-5 Drying		0073000
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		505 (\$000)
	ADDITIONAL PERSONNEL NECESSARY TO CARRY NCTION OF THE PROPOSED FACILITY		3 (PEOPLE)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN D FACILITY		4798 (\$000)
THE EXIST	LIFE-CYCLE COST TO OPERATE AND MAINTAIN NG FACILITY IF NEW FACILITY IS A		
REPLACEMEN	T		9281 (\$000)
E. PLANNING A	ND DESIGN DATA (ESTIMATE)		
b. .c.	DATE DESIGN STARTED  PERCENT COMPLETE AS OF JANUARY 15 1987  PERCENT COMPLETE AS OF OCTOBER 1 1987  DATE DESIGN COMPLETED		JAN 86 50 100 MAR 87
1	DARD OR DEFINITIVE DESIGN YES E DESIGN WAS MOST RECENTLY USED:	NO X	
a. PROD b. ALL c. TOTA d. CONT	OTAL - \$000)  OUCTION OF PLANS AND SPECS  OTHER DESIGN COSTS		40 70 110 77 33
4. CONSTRU	CTION START DATE (PLANNED)		FEB 88

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1. COMPONENT ARMY	FY 19	9 88 MILITARY C	CONSTRUCT	ION PF	OJECT D		DATE	1987
LOUISIANA A Louisiana		ATION MMUNITION PT	4. PRC		TLE ! CEMENT BARRICADE	Mobile Es, Ar	·	T
PROGRAM ELEME	NT	6. CATEGORY CODE	1	JMBER TEMP 314-2		JECT CO	ST (\$000	590
<del></del>	-		COST ESTIMATE		<u>`</u>			
<del>~</del>		ITEM		U/M	QUANTITY		NIT	COST (\$000)
PRIMARY FAC	LLITY							
SUPPORT FAC	CILITI	ES		LS			(	506 506
TOTAL CONTI SUPERVISION TOTAL REQUI TOTAL REQUI	RACT C N, INS EST EST (R	PECT & OVHD ( 5.5	0%)					506 51 557 31 588 590
buildings earth fill	repla (D-122 ed, 13	ice four barricade 0 and D-1222). Ex 5 ft high by vario	isting str	uc ture	s are wo	on su oden	revet	ted and
ft high x of meet crite  REQUIREMEN Barricades	48 ft ria es T: are 1	deteriorated barr wide x various le stablished by AMC- required to provid acilities in accor	ngths (220 R 385-100. e adequate	or 31	5 ft lon	g). B	arric on fo	ades will

becuase of deterioration.

1. COMPONENT  ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT DATA	2. DATE JAN 1987
3. INSTALLATION	AND LOCATION	
LOUISIANA ARM	Y AMMUNITION PT	
Louisiana		
4. PROJECT TIME	Bilization Group 1	5. PROJECT NUMBER
REPLACEMENT		TEMP
REPL BARRICAD	ES, AREA D	5314-21

## CURRENT SITUATION:

Existing earthen barricades are supported by wood pilings and timber headers. The wooden support structure are severely rotted and will ultimately allow the barricade to fall. Repair of the revetment structure was considered but determined not to be feasible.

# IMPACT IF NOT PROVIDED:

Failure to approve this project will ultimately result in the collapsing of existing barricades. Production will be restricted due to inadequate explosion protection for workers and facilities. Plant will not be able to operate with current quantity/distance limitations.

#### ADDITIONAL:

Explosion protection barricades protect workers, buildings and production equipment and prevent propagation of blast to other explosive production buildings in case of a mishap.

GARY F. ANDREW LTC, OrdC COMMANDING

ESTIMATED CONSTRUCTION START:	MARCH	1988	INDEX:	1572
ESTIMATED MIDPOINT OF CONSTRUCTION:	JUNE	1988	INDEX:	1585
ESTIMATED CONSTRUCTION COMPLETION:	SEPTEMBER	1988	INDEX:	1600

1. (	COMPONENT			2. DATE
	ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT D	ATA	an 1987
		N AND LOCATION		
		Y AMMUNITION PT		-
	uisiana			
		<b>B</b> ilization Group 1		ROJECT NUMBER
	PL&CEMENT		ļ	TEMP
KE	L BAKKICAD	DES. AREA D		5314-21
		SUPPLEMENTAL DATA		
Α.	ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		(\$000)
В.		ADDITIONAL PERSONNEL NECESSARY TO CARRY UNCTION OF THE PROPOSED FACILITY		
С.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
_		LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(\$000)
<b>D.</b>	THE EXISTI			
	REFEROUNER	VT		(\$000)
Ξ.	PLANNING A	AND DESIGN DATA (ESTIMATE)		
	1. STATUS			
		DATE DESIGN STARTED		010985
		PERCENT COMPLETE AS OF JANUARY 15 1987		100
		PERCENT COMPLETE AS OF OCTOBER 1 1987		100
	d.	DATE DESIGN COMPLETED		301287
	2. BASIS			
	b. WHER	NDARD OR DEFINITIVE DESIGN YES RE DESIGN WAS MOST RECENTLY USED: UISIANA AAP	NO	
	a. PROD b. ALL c. TOTA d. CONT	TOTAL - \$000) DUCTION OF PLANS AND SPECS OTHER DESIGN COSTS		
	4. CONSTRU	UCTION START DATE (PLANNED)		150388

Proposed and account proposed account

1. COMPONENT ARMY	FY 1	9 88 MILITARY	CONSTR	UCTION	PRO	DECT DA	Z. DATE	jir 1987
. INSTALLATION A				4. PROJECT	TITL	E		
MILAN ARMY	AMMUN I	TION PLANT	;					_
Tennessee						STG. FAC		
. PROGRAM ELEM	NT	6. CATEGORY CODE	7. PROJI	CT NUMBER	Ą	a mouse	T COST (SO	
		000 00		5317-	۱ ۵			540
P-78-			9. COST EST		1 7			740
		ITEM		U/	M	QUANTITY	COST	(00)
PRIMARY FAC		AC AREA ZZ		L	S			485 485
SUPPORT FAC	CILITIE	:S						
SUBTOTAL	, progr	ENT ( 5.00%)						485 24
TOTAL CONTR								509
		PECT & OVHD ( 5.	60%)					29
TOTAL REQUE	-		30,4,		İ			538
TOTAL REQUE		OUNDED)	•					540
INSTALLED E	QUIPME	ENT-OTHER APPROP						0
O. Description of Pro	posed Con	estruction		i				\
MAGAZINES V COMPATABILI USED TO HOU CONDITIONEI	VILL BE TY GRO USE CON O PRIOF	PROVIDING FOUR E USED TO STORE DUPINGS WHILE AW NDITIONING EQUIP R TO TESTING. NO A NOT SITED WITH	EXPLOSIV AITING T MENT WHE OLD FAC	E COMPON ESTING. RE AMMUN ILITIES	ENT ONE ITI WIL	S OF DIFI (1) MAGA ON COMPOI	FERENT AZINE WII	LL BE
ll. REQUIRE PROJECT :	MENT:	750 SF	ADEQUATE	:	0	SF SUE	SSTD:	0 SF
STORAGE AND EXPLOSIVE (	COMPONE	TIONING SPACE, ENTS AND EXPLOSIOT BE COMPROMISE	VES WILL					

1. COMPONENT	FY 1988 MILITARY CONSTRUCTION PROJECT DATA	2. DATE July 1987					
3. INSTALLATION	N AND LOCATION						
MILAN ARMY AM	MUNITION PLANT						
Tennessee							
4. PROJECT TITL	4. PROJECT TITLE 5. PROJECT NUMBER						
		TEMP					
COND. & STG.	FAC AREA ZZ	5317-19					

# REQUIREMENT :

TO CORRECT SECURITY DEFICIENCIES WITH REGUARD TO EXISTING FACILITIES CURRENTLY UTILIZED FOR STORAGE OF AMMUNITION, EXPLOSIVIES AND TEST WEAPONS. NEW FACILITIES ARE ALSO NEEDED TO CONSOLIDATE THE LOCATION OF CONDITIONING EQUIP- MENT AND RESOLVE COMPATIBILITY PROBLEMS.

#### CURRENT SITUATION:

TEMPORARY SECURITY MEASURES HAVE BEEN TAKEN TO ALLOW LIMITED STORAGE OF TEST WEAPONS AS WELL AS SOME AMMUNITION AND EXPLOSIVES IN EXISTING TEST AREA FACILITIES. THIS TEMPORARY CONDITION CAUSES EXTRA OPERATING REQUIREMENTS THAT IMPEDE TEST AREA FUNCTIONS.

### IMPACT IF NOT PROVIDED :

PROBLEMS CONCERNING SECURITY, STORAGE COMPATIBILITY AS WELL AS LIMITED STORAGE SPACE COULD RESULT IN THE SUSPENSION OF SOME ACTIVITIES AT THE TEST AREA.

J. R. ROBERTS LTC COMMANDING

ESTIMATED CONSTRUCTION START: APRIL 1988 INDEX: 1575
ESTIMATED MIDPOINT OF CONSTRUCTION: OCTOBER 1988 INDEX: 1605
ESTIMATED CONSTRUCTION COMPLETION: APRIL 1989 INDEX: 1623

1. COMPONENT		2. DATE
ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT D	ATA JAN 1987
	N AND LOCATION IMUNITION PLANT	
Tennessee	MUNITION PLANT	
4. PROJECT TITL	E	5. PROJECT NUMBER
2011		TEMP
COND. & STG.	FAC AREA ZZ	5317-19
	SUPPLEMENTAL DATA	
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY	
		(\$000)
	ADDITIONAL PERSONNEL NECESSARY TO CARRY JNCTION OF THE PROPOSED FACILITY	
		(PEOPLE)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN	
THE DESTRE	D FROILITIES	(\$000)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN ING FACILITY IF NEW FACILITY IS A	
REPLACEMEN	TT	(0000)
		(\$000)
E. PLANNING A	AND DESIGN DATA (ESTIMATE)	
l. STATUS	•	
	DATE DESIGN STARTED	JUN 36
	PERCENT COMPLETE AS OF JANUARY 15 1987	95
	PERCENT COMPLETE AS OF OCTOBER 1 1987	100
d.	DATE DESIGN COMPLETED	JAN 37
2. BASIS		
	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	NO
b. WHE	RE DESIGN WAS MOST RECENTLY USED:	
	TOTAL - \$000)	
	DUCTION OF PLANS AND SPECS	
	OTHER DESIGN COSTS	
	IRACT	
	HOUSE	
A CONCTRI	UCTION START DATE (PLANNED)	
4. CONSTR	CITON START DATE (FLANKED)	

1. COMPONENT						2. DAT	
ARMY	FY	19 88 MILITARY C	CONSTRUC	CTION PR	OJECT DA	TA	1881 MAI
3. INSTALLATION A		ATION nunition Pt	4. P	ROJECT TIT		bilGroup	> 1
Virginia	ıy Amın	nunition Pt		REPLAC REPLAC	EFIVE (5	) BARRIO	CADES
B. PROGRAM ELEME	NT	6 CATEGORY CODE	7. PROJECT			CT COST (\$0	
		226 80		TEMP 532616		1 (	300
			COST ESTIMA		!	1,(	000
		ITEM		U/M	QUANTITY	COST	(\$000)
PRIMARY FAC	CILIT	Υ		-			885
REPLACE	5 BAI	RRICADES		LS			( 885
							<b>i</b> !
SUPPORT FA	- <b>1</b> 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	, tre					
SOFFORT PAGE	انطلد	163					
SUBTOTAL							885
CONTINGENCY TOTAL CONTE		CENT ( 5.00%)					45 930
		SPECT & OVHD ( 5.50	0%)				50
TOTAL REQUE							980
TOTAL REQUE		ROUNDED) MENT-OTHER APPROP					1,000
INSTRUCTO	.qorr.	TENT STHEK AFFROI				į	
10. Description of Pro	posed Co	onstruction					
COMPLETELY	REMOV	/E AND RECONSTRUCT	BARRICAD	ES FOR F	IVE (5) A	CTIVE PR	OPE LLA NT
		INGS. NOT SITED IN			,		
11. REQUIRE	MENT:	SF AI	DEQUATE:		SF SU	BSTD:	0 SF
PROJECT :			DE QUILLE.		51 50		0 51
		JLTI-STORY AND THRE		•			
		RRICADES WITH ONE M PROJECT MUST REMOV					
		SSING THROUGH OR AT				•	
		GH THE BARRICADE PO					
		ND SUPPORT FRAMING BE DIVERTED AWAY FR					
		FING AND WIRING TO					
		S OPEN WIRING AND					
FACILITIES	AT RA	VAP AT ONE TIME, IT	T HAS PRE	VIOUSLY	BEEN DECI	DED TO	ORRECT

THE CONDITIONS WHEN MAJOR WORK IS PERFORMED ON INDIVIDUAL BUILDINGS. NEW

1. COMPONENT . ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT DATA	2. DATE  JAN 1987
3. INSTALLATIO	N AND LOCATION Ammunition Pt	
REPLACEMENT	Eilization Group l (5) BARRICADES	5. PROJECT NUMBER TEMP 532616

PROJECT :

(CONT)..

WIRING AND CONDUIT ON BARRICADES CORRECTS THE MAJORITY OF THE REQUIREMENTS.

#### REQUIREMENT :

THIS PROJECT IS THE NINTH PHASE OF AN ANNUAL REPLACEMENT PROGRAM FOR THE BARRICADES AT THIS PLANT WHICH WERE ERECTED IN THE 1940-41 PERIOD. THIRTY-THREE BARRICADES IN PHASE 1 (FY-80) THROUGH PHASE V (FY-84) HAVE BEEN COMPLETED. REPAIRS TO MANY OF THESE BARRICADES HAVE BECOME EXCESSIVE AND CANNOT KEEP UP WITH THE RATE OF DETERIORATION, AND THE STRUCTURAL INTEGRITY CANNOT BE ASSURED.

# CURRENT SITUATION:

240 BARRICADES ARE REQUIRED AT THIS PLANT TO MEET CURRENT PRODUCTION SCHEDULES AND FOR MOBILIZATION. A PORTION OF THESE CAN BE MAINTAINED FOR THE NEXT 20 YEARS. THE REMAINING ONES SHOULD BE REPLACED BECAUSE OF DECAYING OF THE MAJOR STRUCTURAL COMPONENTS. A REPLACEMENT PROGRAM HAS BEEN STARTED TO RENEW THE BARRICADES AT THESE BUILDINGS, A FEW EACH YEAR, BEGINNING WITH THE ONES THAT ARE IN GREATEST NEED OF REPLACEMENT.

# IMPACT IF NOT PROVIDED:

WITHOUT ADEQUATE BARRICADES, RAAP COULD NOT CONTINUE TO OPERATE WITHIN EXISTING INTRALINE QUANTITY DISTANCES.

ADDITIONAL: NOT REQUIRED.

G. J. Savitske LTC, CMLC COMMANDER

ESTIMATED CONSTRUCTION START: MAY 1988 INDEX: 1608
ESTIMATED MIDPOINT OF CONSTRUCTION: JANUARY 1989 INDEX: 1655
ESTIMATED CONSTRUCTION COMPLETION: SEPTEMBER 1989 INDEX: 1694

1. COMPONENT			2. DATE
A D. A.V.	FY 1988 MILITARY CONSTRUCTION PROJECT	DATA	JAN 1087
ARMY 3 INSTALLATION	N AND LOCATION		
Radford Army			
Virginia			
4. PROJECT TIEA REPLACEMENT	Kilization Group 1	5.	PROJECT NUMBER TEMP
	(5) BARRICADES		532616
		<del> </del>	<del></del>
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		0
			(\$000)
1	ADDITIONAL PERSONNEL NECESSARY TO CARRY NCTION OF THE PROPOSED FACILITY		0
OUI THE FU	NCTION OF THE PROPOSED PACIETY		(PEOPLE)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		·
THE DESIRE	D FACILITY		0 (\$000)
D. ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(\$000)
	NG FACILITY IF NEW FACILITY IS A		
REPLACEMEN	T		0 (\$000)
			(\$000)
E. PLANNING A	ND DESIGN DATA (ESTIMATE)		
l. STATUS			
	DATE DESIGN STARTED		Jul 85
b.	PERCENT COMPLETE AS OF JANUARY 15 1987		70
	PERCENT COMPLETE AS OF OCTOBER 1 1987		100
d.	DATE DESIGN COMPLETED		Mar 87
2. BASIS			
	DARD OR DEFINITIVE DESIGN YES	NO	
b. WHER	E DESIGN WAS MOST RECENTLY USED:		
,	OTAL - \$000)		
	OUCTION OF PLANS AND SPECS		
	OTHER DESIGN COSTS		
	RACT		
	OUSE		
4. CONSTRU	CTION START DATE (PLANNED)		Apr 88
4. 00051R0	OTTOM START DATE (LEARNED)		

1. COMPONENT	FY 1	9 88 MILITARY C	CONSTRUCTIO	N PR	OJECT DA	Z. DATE	JAN 1367
3. INSTALLATION A	ND LOCA	TION	4. PROJE	CT TIT	I.S. Vol	bilGroup	
		· -	i		ement	bilGroup	1
Radford Arm Virginia	y Amm	unition Pt				ion at Ev	plosive Op
5. PROGRAM ELEME	MT	6. CATEGORY CODE	7. PROJECT NUM			T COST (\$00	
J. FROGRAM ECEME		6. CATEGORT CODE	TEM		a. Phosec	.,	<b>.</b> ,
		226 80		0-02			540
<del>-</del>			COST ESTIMATES	0 02		<del></del> -	240
		ITEM		U/M	QUANTITY	COST	COST (\$000)
PRIMARY FAC							465
Replace E	arric.	ad e s		LS	<del></del>	(	465)
SUPPORT FAC	CILITI	ES					
TOTAL CONTR	ACT C I, INS	PECT & OVHD ( 5.50	)%)				465 47 -12 28 540 540
•		ENT-OTHER APPROP					0)
10. Description of Pro	·					L	· · · · · · · · · · · · · · · · · · ·
Completely	remov	e and re-construct				active	
	mult	SF AD i-story and two si s with one multi-s			le revett		
project mus passing thr through the and support diverted awand wiring open wiring	t remough of the barr fram way frome to me	ove and re-install or attached to the icade portals are ing are to be replose the barricade fet the latest code nonconforming electory been described.	l utilities, be barricades. to be replaced and the foundation. Uses. Note: Ratetrical at al	proce Also ed. sur pgrace her	ess pipingo, the floop Deteriora face draide the ele than upgra	g and duc oors and ted escap nage is t ectrical ade the l ies at R/	twork roofs be chutes to be lighting 1940's

major work is performed on individual buildings. New wiring and conduit on

1. COMPONENT		2. DATE					
ARMY	FY 1988MILITARY CONSTRUCTION PROJECT DATA	A JAN 1987					
3. INSTALLATIO	3. INSTALLATION AND LOCATION						
Radford Army	Ammunition Pt						
Virginia							
4. PROJECT TIME	bilization Group l	5. PROJECT NUMBER					
Replacement		TEMP					
Replace Barri	cades at Explosive Operating Buildings	2700-02					

PROJECT :

(CONT)..

barricades corrects the majority of the requirements.

# REQUIREMENT :

This project is part of an annual replacement program for the barricades at this plant which were erected in the 1940-11 period. Thirty-three barricades in Phase 1 (FY-80) through Phase V (FY-84) have been completed. Repairs to many of these barricades have become excessive and cannot keep up with the rate of deterioration, and the structural integrity cannot be assured.

### **CURRENT SITUATION:**

240 barricades are required at this plant to meet current production schedules and for mobilization. A portion of these can be maintained for the next 20 years. The remaining ones should be replaced because of decaying of the major structural components. A replacement program has been started to renew the barricades at these buildings, a few each year, beginning with the ones that are in greatest need of replacement.

# IMPACT IF NOT PROVIDED:

Without adequate barricades, RAAP could not continue to operate within existing intraline quantity distances.

G. J. Savitske LTC, OrdC Commander

ESTIMATED CONSTRUCTION START:	JA NUA RY	1988	INDEX: 1	567
ESTIMATED MIDPOINT OF CONSTRUCTION:	JULY	1988	INDEX: 1	590
ESTIMATED CONSTRUCTION COMPLETION:	JANUARY	1989	INDEX: 1	616

1.	COMPONENT		. DATE	
•	4.044	FY 19 <sup>88</sup> MILITARY CONSTRUCTION PROJECT D	ATA	JAN 1987
-	ARMY	N AND LOCATION		
		Ammunition Pt		
۷i	rginia			
		bilization Group 1	5. PR	DJECT NUMBER
	placement place Barri	cades at Explosive Operating Buildings		TEMP 2700-02
	F	July 20 2. Province of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Management of the Partial Managemen		2700 02
		SUPPLEMENTAL DATA		
Α.	ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		0 (\$000)
В.	NUMBER OF	ADDITIONAL PERSONNEL NECESSARY TO CARRY		(4000)
	OUT THE FU	NCTION OF THE PROPOSED FACILITY		0
٠.	ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
۱ <sup>۲۰</sup>		D FACILITY		0
				(\$000)
D.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN NG FACILITY IF NEW FACILITY IS A		
		T		0
	-	·		(\$000)
Ε.	PLANNING A	ND DESIGN DATA (ESTIMATE)		:
1	1. STATUS			
ł		DATE DESIGN STARTED		OCT 86
1		PERCENT COMPLETE AS OF JANUARY 15 1987		70
}		PERCENT COMPLETE AS OF OCTOBER 1 1987  DATE DESIGN COMPLETED		100 MAR 87
İ	<b>a</b> •	DATE DESIGN COMPLETED		
l	2. BASIS			
		DARD OR DEFINITIVE DESIGN YES E DESIGN WAS MOST RECENTLY USED:	<b>N</b> O	
	3. COST (T	OTAL - \$000)		
		UCTION OF PLANS AND SPECS		
		OTHER DESIGN COSTS		
		RACT		
1	e. IN H	OUSE		
	4. CONSTRUC	CTION START DATE (PLANNED)		JAN 38

1. COMPONENT	FY 19 85	MILITARY C	ONST	RUCTIO	N PR	OJECT DAT	2. DATE	JAN 1987
3. INSTALLATION A	ND LOCATION			4. PROJEC	T TIT	LE Mob	ilGroup	2
Twin Cities		Pt		Mod	lerni	zation		_
Minnesota	•			Ig	loo s	Storage		
5. PROGRAM ELEME	NT 6. CAT	EGORY CODE	7. PROJ	ECT NUME		a. PROJEC	T COST (\$000	)
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	<del></del>		OST EST				<u></u>	_
		TEM		1	U/M	QUANTITY	COST	COST (\$000)
PRIMARY FAC 42180	ILITY				EA	4	411000(	1,644
Paving,	Service	os & Gutters no( )			LS LS LS	  	( ( (	644 20) 120) 474) 30)
SUBTOTAL CONTINGENCY TOTAL CONTR SUPERVISION TOTAL REQUE TOTAL REQUE INSTALLED E	ACT COST I, INSPECT ( ST ST (ROUNDE	S OVHD ( 8.40	<u>"</u> "					2,288 114 2,402 202 2,604 2,600

## 10. Description of Proposed Construction

DESCRIPTION Construct 4 concrete earth-covered, steam-heated, permanent igloos (3100 sf each) for propellant powder storage. Each igloo is to have a mechanical dock leveler, all utilities, road and rail access, and full security and safety systems. Existing salvage area is to be relocated as necessary, and existing wood frame magazines are to be demol- ished.

11. REQUIREMENT: 12,400 SF ADEQUATE: 0 SF SUBSTD: 12,400 SF

PROJECT :

Construct four propellant powder storage igloos, and demolish existing substandard wood frame structures.

REQUIREMENT:

This project is required to provide powder storage facilities that will meet the criteria of Army security and safety reg-ulations.

1. COMPONENT  ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT DATA	2. DATE					
3. INSTALLATION AND LOCATION Twin Cities Army Ammo Pt							
Minnesota							
4. PROJECT TITE	Bilization Group 2	5. PROJECT NUMBER					
Modernization TEMP							
Igloo Storage	:	2800-8					

# CURRENT SITUATION:

Present facilities are substandard, temporary wood structures that do not meet safety/security standards, and have been used under waivers which will no longer be granted.

# IMPACT IF NOT PROVIDED:

If this project is not approved, use of the existing facilities will be possible only if waivers are granted -- since the structures are not in compliance with AR 190-11 and DARCOMR 190-3.

#### ADDITIONAL:

The project described in this 1391 is part of a total project for six storage igloos. This portion of the work -- for four igloos -- is intended to be constructed in FY88. The remaining two igloos and associated support facilities are proposed to be done in FY89. Estimated costs for the FY89 work are: 2igloos = \$822000, support facilities = 64000, and contingency and SIOH = 95000 -- for a fy89 total of \$981000.

/S/ Theodore E. Schulte
Theodore E. Schulte
Commanders Representative

ESTIMATED CONSTRUCTION START: APRIL 1988 INDEX: 1575
ESTIMATED MIDPOINT OF CONSTRUCTION: OCTOBER 1988 INDEX: 1605
ESTIMATED CONSTRUCTION COMPLETION: APRIL 1989 INDEX: 1623

1.	COMPONENT			2. DATE			
	ARMY	DATA	JAN 1987				
		N AND LOCATION					
	in Cities A nnesota	rmy Ammo Pt					
4.	4. PROJECT TIME ilization Group 2  Modernization  5. PROJECT NUMBER TEMP						
Ig	loo Storage		L	2800-8			
		SUPPLEMENTAL DATA					
٨	FCTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		404			
A.	ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		(\$000)			
В.		ADDITIONAL PERSONNEL NECESSARY TO CARRY NCTION OF THE PROPOSED FACILITY		0			
		·		(PEOPLE)			
C.		LIFE-CYCLE COST TO OPERATE AND MAINFAIN D FACILITY					
	INE DESIKE	D FACILITY		(\$000)			
D.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN NG FACILITY IF NEW FACILITY IS A					
	REPLACEMEN	T		(\$000)			
				(3000)			
E.	PLANNING A	ND DESIGN DATA (ESTIMATE)					
	1. STATUS						
		DATE DESIGN STARTED		NOV 86			
		PERCENT COMPLETE AS OF JANUARY 15 1987 PERCENT COMPLETE AS OF OCTOBER 1 1987		60 100			
		DATE DESIGN COMPLETED		FEB 87			
	2. BASIS						
		DARD OR DEFINITIVE DESIGN YES X	NO				
	b. WHER	E DESIGN WAS MOST RECENTLY USED:		,			
				2			
		OTAL - \$000)					
		UCTION OF PLANS AND SPECS		70			
		L COST (c) = (a)+(b) OR (d)+(e)		70			
		RACT		_			
	e. IN H	OUSE		70			
	4. CONSTRU	CTION START DATE (PLANNED)		APR 88			
1							

1. COMPONENT		41.55		2. DAT	E  An 1987			
ARMY FY 19 88 MILITAR	Y CONSTRUCTIO	N PRO	JECT DA	TA	, ,			
INSTALLATION AND LOCATION	4. PROJE	CT TITL	.E	<del>,                                    </del>				
Lone Star Army Ammunition Pt	. I Mc	odern:	ization					
Texas	l cı	nem La	ab Rehabi	litatio	n			
PROGRAM ELEMENT 8. CATEGORY CODE	7. PROJECT NUMI							
	TER							
226 90	270	00-03	<u> </u>		550			
	9. COST ESTIMATES							
ITEM		U/M	QUANTITY	COST	(\$000)			
PRIMARY FACILITY					47			
Chem Lab Rehabilitation		LS			( 47			
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SUPPORT FACILITIES				<del></del>	a'			
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SUBTOTAL					/ -			
CONTINGENCY PERCENT (10.00%)	ļ				47			
TOTAL CONTRACT COST		į			52			
SUPERVISION, INSPECT & OVHD ( 5	50%)		ľ		_			
TOTAL REQUEST	• 50 % )				2			
TOTAL REQUEST (ROUNDED)					54			
INSTALLED EQUIPMENT-OTHER APPRO	\D	ľ			5.5			
THO THERE'S EQUITION TO THER AFFRE	/r				( 1			
Description of Proposed Construction				· · · · · · · · · · · · · · · · · · ·	<u> </u>			
Contribution of Proposito Construction								
Rehabilitate this plant's pr	oduction cham 1	2h +	o imalud					
1) six work tables including dr	ain troughs si	nke.	3) 5: br	e replac	rement or			
hood stations; 3) window air co	all troughs, si	inks;	2) eight	Tume e	xnaust			
a central environmental unit; 4	Adetaming syst	.em ir	the ins	crument	room wit			
includes modification of the he	) deceriorated	condi	ictive ii	ooring.	Also			
exchanger in the storage room,	acting system, i	ustar	tation o	ranar	r · .			
hazardous gas cylinders. Site p	and construction	)	a storag	e tacii	ity for			
analysis not required Procure	can/salety subm	115510	n not re	quired.	Hazard			
analysis not required. Procurem	Tant OCUA A	ouse m	ianutactu	re of an	ny			
equipment or item will meet cur	Tent USHA, Army	7, Fed	eral, St	ate, or	Local			
regulation or law, whichever is	more stringent	. не а	iting and	air coi	nditionin			
required.								
11. REQUIREMENT: 6,049 SF	A DE OUA TE	- <del></del>	0.0	D.O.T.	<del>-,-,,</del>			
11. REQUIREMENT: 6,049 SF	ADEQUATE:	C	SF SU	BSTD:	6,049 SF			

1. COMPONENT	2. DATE 1987						
ARMY							
	3. INSTALLATION AND LOCATION  Lone Star Army Ammunition Pt  Texas						
4. PROJECT TITLE Modernizat Chem Lab R	1	CT NUMBER TEMP 2700-03					

#### PROJECT:

Rehabilitation of existing I-13 Chemical Laboratory

## REQUIREMENT :

Required to perform analysis of various production chemical mixes for explosives content and environmental tests.

## **CURRENT SITUATION:**

The existing Chem Lab was constructed in 1941/42. It is an unsafe antiquated, and deteriorated facility where various chemicals and explosives are handled daily. The facility in its present deteriorated condition is totally inadequate to provide a clean and safe environment for laboratory personnel.

#### IMPACT IF NOT PROVIDED:

There are no alternatives to this project if the existing Chem Lab is to be rehabilitated into an efficient, safe operating facility. In actuality, there are two alternates; one, continue to use the existing facility as is. This is not practical due to the deteriorated obsolete and unsafe condition of the existing facility. Two, build a new facility. This is impractical due to the much larger expenditures that would be required. The rehabilitation of the existing facility is the only practical alternative.

## ADDITIONAL:

This project has been reviewed for historic impact and complies with the intent of PL 89-665 and Executive Order 11593. All appropriate measures will be taken to ensure that the health of the worker is protected within all existing state and federal laws and regulations. This project has been

10

1. COMPONENT

FY 1988 MILITARY CONSTRUCTION PROJECT DATA

ARMY

3. INSTALLATION AND LOCATION

Lone Star Army Ammunition Pt

Texas

4. PROJECT TITLE

Modernization

Chem Lab Rehabilitation

2. DATE

JAN 1987

5. PROJECT NUMBER

TEMP

2700-03

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1. COMPONENT

FY 1988MILITARY CONSTRUCTION PROJECT DATA

3. INSTALLATION AND LOCATION
Lone Star Army Ammunition Pt
Texas

4. PROJECT TITLE
Modernization
Chem Lab Rehabilitation

2. DATE
JAN 1,37

5. PROJECT NUMBER
TEMP
2700-03

reviewed and it has been determined that an Environmental Impact Statement pursuant to PL 91-190 is not required.

/S/ DOUGLAS R. BAKER
DOUGLAS R. BAKER
LTC ORDC
COMMANDING

ESTIMATED CONSTRUCTION START: APRIL 1988 INDEX: 1575
ESTIMATED MIDPOINT OF CONSTRUCTION: DECEMBER 1988 INDEX: 1612
ESTIMATED CONSTRUCTION COMPLETION: SEPTEMBER 1989 INDEX: 1645

1. COMPONENT	JAN 1987		
3. INSTALLATION A	ND LOCATION		<u> </u>
	my Ammunition Pt	•	
Texas			
4. PROJECT TITLE		5. PROJEC	TNUMBER
Modernizatio	1		TEMP 2700-03
Chem Lab Reh	abilitation		2700-03
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY	ť	(2000)
	ADDITIONAL PERSONNEL NECESSARY TO CARRY UNCTION OF THE PROPOSED FACILITY		(\$000)
C. ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
	ED FACILITY	•	(\$000)
THE EXIST	LIFE-CYCLE COST TO OPERATE AND MAINTAIN ING FACILITY IF NEW FACILITY IS A		
REFERGERE		•	(\$000)
E. PLANNING	AND DESIGN DATA (ESTIMATE)		
1. STATUS			
а.	DATE DESIGN STARTED	•	OCT 85
	PERCENT COMPLETE AS OF JANUARY 15 1987.		100
	PERCENT COMPLETE AS OF OCTOBER 1 1987.  DATE DESIGN COMPLETED		100 DEC 86
	DATE DESIGN COMPLETED	•	DEC 00
2. BASIS	NDARD OR DEFINITIVE DESIGN YES	NO	
	RE DESIGN WAS MOST RECENTLY USED:	NO	
	TOTAL - \$000)		
<del>-</del>	DUCTION OF PLANS AND SPECS		
	OTHER DESIGN COSTS		
	AL COST (c) = (a)+(b) OR (d)+(e) TRACT		
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	UCTION START DATE (PLANNED)		
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1. COMPONENT			· <del>······</del>	<del></del>	<del></del>	2. DAT			
ARMY	FY 19	88 MILITARY	CONSTRUCTI	ON PR	OJECT DA	TA	JAN (Be/		
3. INSTALLATION A	ND LOCA	TION	4. PRO.	JECT TIT	LE Mo	b + 1 GROUI	3		
Ravenna Arm	y Aumiti	nition Pt ,	M	10dern	ization				
Ohio			1	ntru	Alarm Sys	/Locks/l	lasps		
S. PROGRAM ELEME	NT	6. CATEGORY CODE	7. PROJECT NU			CT COST (\$0			
			TE	MP	1	[			
		880 40		300-3			2,600		
		9.	COST ESTIMATES	3					
		ITEM		U/M	QUANTITY	COST	COST (\$000)		
PRIMARY FAC	ILITY	<del></del>		1			2,236		
		NSTRUCTION		LS			( 1,781)		
		UIP COSTS		LS	~		( 292)		
		T, VECP, FEE		LS			( 163)		
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SUPPORT FAC	ILITIE	S		1		·	1		
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2110 7 7 4 1				+ +			2,236		
SUBTOTAL		NT (10 00%)					224		
		NT (10.00%)				1	2,460		
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		PECT & OVHD ( 5.5	03)				2,595		
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TOTAL REQUE							1.		
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10 Description of Prop	iosea Cons	truction							
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on seven hi	und red 	seventy-six (776	) earth-cov	ereu .	throughou	it the f	acility.		
magazines.	Storag	ge magazines are	rocaced in	digas	CHIOUGHOU	ic circ i	activey.		
Provide an	intrus	sion detection sy	Stem on the	r . y = 13 :	igai (ja)	lisa bas	dougrtars		
storage ig	loos wi	th control conso	de located	at sec	curity por	cice nea	uquarters.		
Storage ig	loos ar	re all located in	Block C. P	rojeci	cwill pro	ivide to	ations		
lighting or	n each	igloo including	all electri	C Serv	vice and (	ommunic.	foncina		
cable neces	ssary t	o service the II	S equipment	and	the Lights	5 •   FB"2 	renerng u		
shall be pr	rovided	d around the IDS	area with n	ecessa	ary gates	and roa	(C)		
extensions	•								
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II. REQUIR	EMENI:	38 3X V	ADEOCATE:		0 68 9		20 DA		

1. COMPONENT	FY 1988 MILITARY CONSTRUCTION PROJECT DATA					
3. INSTALLATION A Ravenna Arm Ohio	•					
Modernizati		CT NUMBER TEMP 2800-3				

#### PROJECT :

This project includes the purchase and installation of approved high-security locks and hasps in accordance with AR 190-11 on 776 earth-covered and/or aboveground storage magazines. On 38 selected sites the earth-covered storage magazines will require IDS equipment, lights, and fencing to satisfy AA&E Category II storage requirements.

#### REQUIREMENT :

This project is required to comply with the security requirements of DOD Manual 5100.76M which requires approved locks and hasps IAW AR 190-11 for all arms, ammunition, and explosive storage. The 38 selected sites must comply with the security requirements of DOD Manual 5100.76M for the storage of Category II AA&E which requires IDS, lights, and security fencing. This project will eliminate the need for two-hour frequency patrols of the Category II storage area and will also improve the security of sensitive AA&E.

### CURRENT SITUATION:

Currently Category II AA&E are stored in underground magazines which are not in compliance with regulations requiring high security locks and hasps, intrusion detection equipment, lighting, and fencing. Other Category III and IV AA&E are stored in underground and/or aboveground magazines which are not in compliance with regulations requiring high security locks and hasps. A need to waive existing regulations will have to be granted if the proposed work is not accomplished.

## IMPACT IF NOT PROVIDED:

Failure to approve this project will mean this installation will not be in compliance with the previously stated regulations. A waiver or exception will have to be granted. On Category II storage security patrols will have

2. DATE 1987 1. COMPONENT FY 1988 MILITARY CONSTRUCTION PROJECT DATA ARMY " 3. INSTALLATION AND LOCATION Ravenna Army Ammunition Pt 4. PROJECT TITLE Mobilization GROUF 3 5. PROJECT NUMBER Modernization TEMP Intru Alarm Sys/Locks/Hasps 2800-3 to be maintained at two-hour intervals until project is complete and operational or waiver is granted. /S/ Robert J. Kasper Robert J. Kasper Commanding Officers Rep. ESTIMATED CONSTRUCTION START: APRIL 1988 INDEX: 1575 ESTIMATED MIDPOINT OF CONSTRUCTION: OCTOBER 1988 INDEX: 1605 ESTIMATED CONSTRUCTION COMPLETION: APRIL 1989 INDEX: 1623

1. COMPONENT				2. DATE	
ARMY		FY 1988 MILITARY CONSTRUCTION PROJEC	JAN 1987		
	ATION A	L LOCATION	<del></del>	<u> </u>	
<b>Ŗ</b> avenn		Ammunition Pt			
Óhio					
		obilization GROUP 3	5. PROJECT		
Modern	TEMP				
Incra	MIAIM	Sys/Locks/Hasps		2800-3	
		SUPPLEMENTAL DATA			
A. EST	TIMATED	ANNUAL COST TO OPERATE PROPOSED FACILIT	Y	154.4 (\$000)	
B. NUM	BER OF	ADDITIONAL PERSONNEL NECESSARY TO CARRY		(4000)	
TUO	THE F	UNCTION OF THE PROPOSED FACILITY	•	4	
e rem		. LICE CVOLE GOOD TO OPERATE AND MAINTAIN		(PEOPLE)	
		LIFE-CYCLE COST TO OPERATE AND MAINTAIN ED FACILITY		12 P	
		22 (110121111111111111111111111111111111	•	(\$000)	
		LIFE-CYCLE COST TO OPERATE AND MAINTAIN ING FACILITY IF NEW FACILITY IS A			
REP	PLACEME	NT	•		
				(\$000)	
E. PLA	NNING	AND DESIGN DATA (ESTIMATE)			
. 1.	STATUS				
		DATE DESIGN STARTED			
		PERCENT COMPLETE AS OF JANUARY 15 1987.			
		PERCENT COMPLETE AS OF OCTOBER 1 1987. DATE DESIGN COMPLETED			
	J •	DESIGN COMPLETED	• • • • • • • • • • • • • • • • • • • •		
2.	BASIS				
		NDARD OR DEFINITIVE DESIGN YES RE DESIGN WAS MOST RECENTLY USED:	NO		
3.	COST (	TOTAL - \$000)			
		DUCTION OF PLANS AND SPECS			
		OTHER DESIGN COSTS			
		TRACTTRACT			
		HOUSE	•		
4.	CONSTR	UCTION START DATE (PLANNED)	•		

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1. COMPONENT ARMY	FY 19	88	MILITARY	CONST	RUCTIO	ON PF	ROJECT DA	TA 2. DATE	180 <i>l</i>		
3. INSTALLATION A	ND LOCAT	ION			4. PROJ	ECT TI	TLE				
VOLUNTEER AF			NT :		Mo	dern	ization				
Tennessee					Se	curi	ty Fencing				
6. PROGRAM ELEMENT 6. CATEGORY CODE				7. PROJ	ROJECT NUMBER 8. PROJECT COST (\$000)						
			872 10		588	2800			740		
			9.	COST EST	IMATES						
		17	EM			U/M	QUANTITY	COST	COST (\$000)		
PRIMARY FAC Procure/In SUPPORT FAC	nstall	:	encing			LF	44,600	14.88	664 664)		
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10 Description of Proposed Construction

This project will consist of replacing/rehabilitating security fencing from a designated point on the west side of the installation to gate IA - a distance of approximately 12.9 miles. Most of the existing fencing is approximately 40 years old. Newer sections consisting of approximately 2.8 miles which have been rehabilitated may, where feasible, be retained in the current status. In addition, the fencing around the two water pump stations which consists of approximately 0.6 miles of fence will be replaced. The removed fencing is to be delivered to the salvage yard for disposal.

The new fencing and hardware are to be in compliance with the latest revision of STD 646. It shall be of type FE-6, 7 foot fabric with appropriate hardware. Gates 5A, 6, and 7 and four gates at the pump stations are to be replaced in kind with matching hardware in accordance with STD 646.

1. COMPONENT

FY 1988MILITARY CONSTRUCTION PROJECT DATA

ARMY

3. INSTALLATION AND LOCATION

VOLUNTEER ARMY AMMO PLANT

Tennessee

4. PROJECT TITLE

Modernization

Security Fencing

2. DATE

JAN 1997

5. PROJECT NUMBER

TEMP
5882800

#### DESCRIPTION OF PROPOSED CONSTRUCTION

(CONT)..

Terrain along the bottom of the fence shall be graded to provide a surface which is within 2 inches of the bottom of the fabric for the entire length. This grading shall be accomplished in such a way as to optimize drainage to prevent washing under and near the fence.

Clear zones shall extend 12 feet on the outsile and 30 feet on the inside of the fence (available real estate permitting).

Material is to be in accordance with Federal Specification RR-F-lf with installation as specified and in accordance with accepted industry best practice. Grounding is to be in accordance with STD 646.

Temporary fencing sections are to be provided sequentially as increments of the existing fence are removed and the new erected. This is to be done in such a way as to maintain the required security throughout the entire construction period.

11. REQUIREMENT: 68,100 LF ADEQUATE: 23,500 LF SUBSTD: 44,600 LF PROJECT:

Replacement/rehabilitation of 44,600 LF of security (perimeter) fencing.

#### REQUIREMENT :

Completion of this project is required to bring the security (perimeter) fence into compliance with security specifications referenced in the DSAR letter of 8 Dec. 1982 regarding security upgrade projects.

# CURRENT SITUATION:

Increasing maintenance problems are being experienced. The fence has many weak sections where the fabric is in very poor condition and is beyond the point of economically feasible routine maintenance. It does not meet the current minimum height requirement in several areas.

1. COMPONENT

FY 1988 MILITARY CONSTRUCTION PROJECT DATA

3. INSTALLATION AND LOCATION
VOLUNTEER ARMY AMMO PLANT
Tennessee

4. PROJECT TITLE
Modernization
Security Fencing

2. DATE
JAN 187

5. PROJECT NUMBER
TEMP
5882800

IMPACT IF NOT PROVIDED:

If not provided, the installation will remain in non-compliance of the minimum height requirement in several areas. Sections of the fence have deteriorated to the extent that breaching would not be difficult. Increasing maintenance costs and further deterioration of installation security will become problems of significant magnitude.

/S/ James E. Fry
James E. Fry
Civilian
Commander's Representative

ESTIMATED CONSTRUCTION START: APRIL 1987 INDEX: 1523
ESTIMATED MIDPOINT OF CONSTRUCTION: JULY 1987 INDEX: 1539
ESTIMATED CONSTRUCTION COMPLETION: OCTOBER 1987 INDEX: 1555

1. COMPONENT			2 DATE
COMPUNENT	FY 1988 MILITARY CONSTRUCTION PROJECT	T DATA	JA:, 1987
ARMY			JA. 1901
3. INSTALLATION AND VOLUNTEER ARM	ND LOCATION MY AMMO PLANT	•	
Tennessee	,		
4. PROJECT TITLE Modernization	1	5. PROJECT	
Security Fend			TEMP 5882800
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY	Y	(0000)
	ADDITIONAL PERSONNEL NECESSARY TO CARRY		(\$000)
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			(\$000)
E. PLANNING A	AND DESIGN DATA (ESTIMATE)		
l. STATUS	DATE DESIGN STARTED	. AUG 36	
b.	PERCENT COMPLETE AS OF JANUARY 15 1987	. 95	
c •	PERCENT COMPLETE AS OF OCTOBER 1 1987	. 100	
d .	DATE DESIGN COMPLETED	. JAN 87	
2. BASIS			
	NDARD OR DEFINITIVE DESIGN YES RE DESIGN WAS MOST RECENTLY USED:	NO	
D. WREI	WE DESIGN WAS MUST RECENTLY USED:		
3. COST (1	IOTAL - \$000)		
	DUCTION OF PLANS AND SPECS	ı	
b. ALL	OTHER DESIGN COSTS	•	
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	HOUSE		
4. CUNSTRE	UCTION START DATE (PLANNED)	•	

1. COMPONENT	FY 1	9 88 MILITARY	CONSTR	UCTIO	ON PE	ROJECT DA	TA 2. DAT		1957
3. INSTALLATION A	ND LOCA	ATION		4. PROJ	ECT TI	TLE			
Lake City	Army A	mmo Plant							
Missouri	•			S	Secur	ity Improv	ements		
5. PROGRAM ELEME	NT	6. CATEGORY CODE	7. PROJ		ABER EMP	8. PROJEC	CT COST (\$6	000)	-
		872 15	1		300 <i>-</i> 0	7		1,15	50
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Road, Fe	ncing	& Turnstile Insta	al latio	n	LS			(	1,045)
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TOTAL CONT SUPERVISIO TOTAL REQU TOTAL REQU	RACT ( N, INS EST EST (F	SPECT & OVHD ( 5.						(	1,045 52 1,097 60 1,157 1,150

Task 1 - To provide access road to Building 35 which will be outside the restricted area. Provide a fenced corridor to restrict employee access to restricted areas when going to and from Building 65. Provide and install security turnstiles (13), badge readers and associated electronics to limit access to restricted areas to authorized personnel.

Task 2 - Provide locks and hasps for Energetic Material Storage buildings (31).

Task 3 - Provide IDS equipment for energetic Material Storage Control and communications link to guard headquarters.

Task 4- Provide and install Closed Circuit Television Systems (CCTV) to monitor areas in several buildings. Where complete rounds are processed or stored and for monitoring the restricted area access on the corridor to

1. COMPONENT	EV 40 88 MILLIA DV CONSTRUCTION DOCUMENT	2. DATE
ARMY	FY 1988 MILITARY CONSTRUCTION PROJECT DATA	JAN 1987
3. INSTALLATION	AND LOCATION	
Lake City Arm	y Ammo Plant	
Missouri	·	<del></del>
4. PROJECT TITL		5. PROJECT NUMBER
Security Impr	ovements	TEMP 2800-07
Building 65.	F PROPOSED CONSTRUCTION ( rovide security for certain ADP areas.	CONT)
	rovide remote duress alarms in high priority a perator Management Offices, and certain remote	
11. REQUIREME PROJECT :	NT: 1 EA ADEQUATE: EA SU	BSTD: 0 EA

This project consists of six (6) security improvement tasks as described in paragraph 10F.

REQUIREMENT :

This project is required to provide necessary security of restricted areas by routing personnel around such areas or by improving personnel monitoring through such areas. This project is required to eliminate security waivers in areas where the corrective action brings the affected area of buildings into total compliance with security requirements. This project is required to provide necessary security of energetic materials, completed rounds of ammunition in process or storage, ADP areas and command group areas. Due to the nature of this requirement, there are no acceptable alternatives to this project.

CURRENT SITUATION:

Security measures in areas encompassed by this project are presently inadequate according to current security requirements. Responsiveness to unauthorized intrusions is limited with current security measures.

IMPACT IF NOT PROVIDED:

Current security measures will continue to be utilized with limited effectiveness and responsiveness. Security requirement waivers will continue to be necessary. Security according to current requirements can not be

					_	
1. COMPONENT	FY 1988 MILITARY CON	NSTRUCTIO	ON PROJEC	T DATA	2. DATE JAN 19	37
	N AND LOCATION y Ammo Plant					
4. PROJECT TITL Security Impr					5. PROJECT NUMBE TEMP 2800-07	R
		·				
IMPACT IF NOT	PROVIDED:			(	CONT)	
obtained in a	reas in question.					
ADDITIONAL :						
This proje	ct will result in som	DENNIS E	. O'BRIEN		personnel.	
		LTC, OD	O'ERIEN			
		Command 1	ng Office	r		
ESTIMATED MID	STRUCTION START: POINT OF CONSTRUCTION STRUCTION COMPLETION:	<b>!:</b>	APRIL OCTOBER APRIL		INDEX: 1605	

1. C	OMPONENT			2. DATE
	ARMY	FY 1988MILITARY CONSTRUCTION PROJECT DATA	A 	jan 1987
		AND LOCATION		
	-	y Ammo Plant		
	souri ROJECT TITL		7 5 P	ROJECT NUMBER
٧. ١	MODEOT TITE		] "	TEMP
Sec	urity Impr	ovements		2800-07
		SUPPLEMENTAL DATA		
Α.	ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		(\$000)
		ADDITIONAL PERSONNEL NECESSARY TO CARRY NCTION OF THE PROPOSED FACILITY		(\$000)
				(PEOPLE)
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	THE DESIRE	D FACILITY		( 2 2 2 2 )
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	REPLACEMEN	T		
				(\$000)
Ε.	PLANNING A	ND DESIGN DATA (ESTIMATE)		
	1. STATUS			
	а.	DATE DESIGN STARTED		OCT 86
	_	PERCENT COMPLETE AS OF JANUARY 15 1987		10
		PERCENT COMPLETE AS OF OCTOBER 1 1987		100
	d.	DATE DESIGN COMPLETED		OCT 87
	2. BASIS			
		DARD OR DEFINITIVE DESIGN YES NO		
	b. WHER	E DESIGN WAS MOST RECENTLY USED:		
	2 COST (T	OTAL COOO)		
		OTAL - \$000) UCTION OF PLANS AND SPECS		
		OTHER DESIGN COSTS		
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		RACT		
	e. IN H	OUSE		
	4. CONSTRU	CTION START DATE (PLANNED)		APR 88

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# DEPARTMENT OF THE ARMY JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1988/1989

# FY 1989 - PRODUCTION BASE SUPPORT

APPROPRIATION: Procurement of Ammunition, Army

ACTIVITY 2 - Production Base Support

Army Ammunition Installation	Project No.	Project Title	Cost Estimate(\$000)	Page No.
Holston Army PT, Tennessee	5892055	Modernization Explosive Loading Dock	3.350	78
Lake City Army PT, Missouri	5892495	Demolition Relocate & Mod TNR Process	2.150	82
Lake City Army PT, Missouri	5892498	Alteration Covered Walkway Pyro Storage	1.350	<b>გ</b> 6
Indiana Army PT, Indiana	5892547	Modernization Lighting Protection	1.850	90
Holston Army PT, Tennessee	0072000	Modernization MOD Line 10, Comp A-5	5.300	93
Indiana Army PT, Indiana	5895330-13	Addition Shiphse/ Rds-Phase V	.300	97
Indiana Army PT, Indiana	5895330-51	EMCS	.840	101
Kansas Army PT, Kansas	5895329-19	Construction Commercial Truck Do	.230	105
Lake City Army Missouri	5895332-17	Replace Oil Storage Tank	.290	108
Milan Army PT, Tennessee	5895317-18	Maz Mat Stg Bldg-Area S	.810	112
Milan Army PT, Tennessee	5895317-20	Replace Inflatable Shelter	.270	11,

# DEPARTMENT OF THE ARMY JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1988/1989

# FY 1989 - PRODUCTION BASE SUPPORT (Cont'd)

APPROPRIATION: Procurement of Ammunition, Army

# ACTIVITY 2 - Production Base Support

Army Ammunition Installation	Project No.	Project Title	Cost Estimate (\$000)	Page No.
Radford Army PT, Virginia	5895326-16	Replacement Replace (5) Barricades	1.300	118
Radford Army PT, Virginia	5892519	Safety Modernization Upgrade Primary Overhead Electrica	14.200	121
Radford Army PT, Virginia	5895326-15	Replacement Replace Bridge No. 930	.370	125
Twin Cities PT, Minnesota	5895201-22	Addition Package Boilers	.560	128
Lake City Army PT, Missouri	892245	Addition Pyrotechnic Safety Enhance	.830	132
Lone Star Army PT, Texas	5892245	Addition Alteration Production Control Fac	.410	136
Longhorn Army PT, Texas	582245	Modernization Pyro Safety Enhancement	.820	140
Kansas Army PT, Kansas	532918	Enlarge Railroad Docks	.230	144
Longhorn Army PT, Texas	2701-08	Alteration Red Exp to Energ Mat'l	.390	146
Twin Cities Army PT, Minnesota	2800-8	Igloo Storage	3.000	151
Holston Army PT, Tennessee	2701-2	Alteration Electrical SF Corrections	2.400	154

1. COMPONENT ARMY	FY 19 89	MILITARY C	ONSTR	LUCTION PE	ROJECT DA	TA 2. DATE	JAN 1987
NSTALLATION AN HOLSTON ARM Tennessee		N PT12034	!		TLE ization ive Loadir	Dook	
ROGRAM ELEME	NT G. CAT	EGORY CODE	7. PROJ	TEMP		T COST (\$00	
<del></del>		226 16	COST EST	2055			3,350
	•	TEM		U/M	QUANTITY	COST	COST (\$000)
Loading Do Rails, Wal Utilities Battery Ch	ock Barrica ock Facilit lks. Roads narging Sta	y tion		LS LS LS LS	   	   	2,593 694 890 634 274 101 311 311
SUBTOTAL CONTINGENCY TOTAL CONTRA SUPERVISION, TOTAL REQUES TOTAL REQUES INSTALLED EC	ACT COST , INSPECT & ST (ROUNDED	OVHD ( 5.50	%)				2,904 290 3,194 176 3,370 3,350

Construct new loading dock for shipment of explosives. Scope of work includes: demolition of existing loading dock; construction of new loading dock; construction of explosion protection barricades; installation of utilities; access roads railroad spur; and general site improvements as required. Project includes battery charging station for electric forklifts.

11. REQUIREMENT:	SF	ADEQUATE:	SF	SUBSTD:	0	SF
PROJECT:						

Construct a new explosives loading dock with a 250,000 pound explosives load limit. Provide road, parking area, railroad spur, barricade and modern parkaging equipment.

1. COMPONENT  ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	2. DATE JAN 1987
3. INSTALLATIO	N AND LOCATION	
HOLSTON ARMY	AMMUNITION PT12034	3
Tennessee		
4. PROJECT TITL	E	5. PROJECT NUMBER
Modernization		TEMP
Explosive Loa	ding Dock	2055

# REQUIREMENT :

The new dock will replace an indadequate, deteriorated facility. Construction of a new loading dock is essential to provide the capability to simultaneously outload a larger variety of products and to permit palletization of finished explosives resulting in a more efficient operation and the ability to meet FYDP and mobilization requirements.

#### CURRENT SITUATION:

Currently two of the loading docks at Holston are seriously deteriorated. The timber floors in these docks will not support forklifts nor handle palletized loads due to the small size of the buildings.

### IMPACT IF NOT PROVIDED:

Improvement of the industrial readiness posture for loading finished explosvies will not be realized if this project is not funded. The capability to handle a larger variety of products and to palletize the finished explosvies will not be achieved.

# ADDITIONAL :

An environmental assessment will be prepared. It is expected that there will be no significant impact to the environment.

A site/Safety Plan has been submitted and approved.

1. COMPONENT	·	<del>"</del>		2. DATE
1. COMPONENT	FY 1989MILITARY CONS	TRUCTION PROJEC	T DATA	JAN 1437
ARMY				וככי אאנ
	ON AND LOCATION			
HOLSTON ARMY	AMMUNITION PT12034			
4. PROJECT TIT	1 6		Ts	PROJECT NUMBER
Modernizatio			"	TEMP
Explosive Lo				2055
This proj Reference SF	ect is necessary to meet	: FYDP and mobili:	zation re	quirements.
	Ĭ	JAMES F. BALD, JR JAMES F. BALD, JR LTC, OD Commanding		
ESTIMATED CO	NSTRUCTION START:	. JUNE	1990	INDEX: 1674
	DPOINT OF CONSTRUCTION:			INDEX: 1719
ESTIMATED CO	INSTRUCTION COMPLETION:	SEPTEMBER	1992	INDEX: 1766

1.	COMPONENT			2. DATE
	ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT D	ATA	
3.		N AND LOCATION		·
		AMMUNITION PT12034		
	nnessee PROJECT TITL		T 5 1	PROJECT NUMBER
	dernization		] 3. '	TEMP
Ex	plosive Loa	ding Dock		2055
				,
		SUPPLEMENTAL DATA		
Α.	ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		165
R.	NUMBER OF	ADDITIONAL PERSONNEL NECESSARY TO CARRY		(\$000)
] "		NCTION OF THE PROPOSED FACILITY		0
				(PEOPLE)
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	III DESTINE	b theibitt		(\$000)
D.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN		
ļ		NG FACILITY IF NEW FACILITY IS A		NA
	not brobrish			(\$000)
	DIAMMING A	ND DECLON DATA (DOTIMATE)		
ļ .	PLANNING A	ND DESIGN DATA (ESTIMATE)		
	1. STATUS	•		
		DATE DESIGN STARTED		MAR 87
}		PERCENT COMPLETE AS OF JANUARY 15 1988  PERCENT COMPLETE AS OF OCTOBER 1 1988		60 100
		DATE DESIGN COMPLETED		MAY 88
	2. BASIS			
Ì	•	DARD OR DEFINITIVE DESIGN YES	NO X	
ļ	b. WHER	E DESIGN WAS MOST RECENTLY USED:		
	3. COST (T	OTAL - \$000)		
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		OTHER DESIGN COSTS		1 92 1 92
		RACT		192
	e. IN H	OUSE		
	4. CONSTRU	CTION START DATE (PLANNED)		MAR 89
1				

1. COMPONENT ARMY	FY 19 89 MILITARY	CONST	RUCTIO	N PF	OJECT DA	TA 2. DAT		11 7387
INSTALLATION A	ND LOCATION		4. PROJE	CT TI	TLE MOT	bilGroup	p 1	
Lake City A	army Ammo Plant		De	moli	tion	•	•	
Missouri			Re	loca	ite & Mod '	TNR Proc	ces	3
PROGRAM ELEME	NT 6. CATEGORY CODE	7. PROJ	IECT NUME TEM		8. PROJEC	T COST (SC		<u> </u>
	226 16			2495	<u> </u>		2,	150
	9.	COST EST				UNIT		COST
	ITEM			U/M	QUANTITY	COST		(\$000)
Explosive	acturing Bldg. Neutralizing Bldg. emical Station & Stora	g		LS LS LS	  		( ( (	974 450 250 159 115
Water, S Paving, Storn Dr	Service Sewer & Gas Walks, Curbs & Gutters Tainage (1) Demo( )			LS LS LS LS LJ LS	   			972 450 15 91 3 21 2
TOTAL CONTE	PERCENT ( 5.00%) RACT COST INSPECT 4 OVHD ( 5.5	0%)						1,946 97 2,043

TOTAL REQUEST (ROUNDED)

INSTALLED EQUIPMENT-OTHER APPROP

TOTAL REQUEST

The primary facilities consist of two new fire-resistant, non-combustible buildings of permanent construction. The first facility will be an explosive manufacturing building (2,700 square feet) and the second facility a hazardous waste treatment building (1,350 square feet). The explosive manufactured in the building will be Trinitroresorcinol (TNR) a styphnic acid. The TNR produced is used to manufacture Lead Styphnate, a major component in the primer mixture used at the installation. The hazardous waste treatment building will neutralize the wash water waste and then neutralize the waste explosives. Demolition consists of the existing Buildings 82, 83, 94D, T-226 and T-85A. Building 82 is presently utilized for acid and explosive neutralization. Building 83 is presently used for TNR manufacturing. Building 94D, T-226 and T-85A are support facilities for chemical storage, metal powder storage and general supply storage respectively. The existing grounds will be returned to its natural terrain.

11.	REQUIREMENT:	4,050	SF	ADEQUATE:	0	SF	SUBSTD:	3,800	SF

2,155

2,150 2,591)

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1. COMPONENT		2. DATE
ARMY	FY 1989MILITARY CONSTRUCTION PROJECT DATA	JAN 1987
Lake City Art Missouri		
Demolition	pilization Group 1	5. PROJECT NUMBER TEMP
l Relocate & Mo	od TNR Process	T892495

#### PROJECT :

This project will increase employee safety, decrease environmental impact, eliminate the use for an unsound structure, and improve the control of process variables in the manufacturing of Trinitroresorcinol (TNR).

#### REQUIREMENT :

Employee safety will be improved by use of automatic feed equipment, a ventilation system and a remote automatic control room. The automatic feed equipment will reduce the operators' exposure to the 98% Sulfuric Acid and 96% Nitric Acid which are used in the production process. The improved ventilation system will reduce operators' exposure to nitrous oxides and other hazardous fumes. The remote control room will reduce the chance that an operator could be exposed to acid or exposure to an explosion of the reactor kettles due to a runaway reaction. The environmental impact will be decreased by changing the process and using wet scrubbers on the improved ventilation system. The enhanced process reduces fumes and the scrubber will remove the nitrous oxides and other hazardous fumes to the atmosphere. The explosive neutralization facility will better desensitize the explosive waste. The new acid resistant building will be constructed and new production equipment will be furnished for this facility to replace the existing facilities, which the Army Corps of Engineers reported as unsound. The operator will be permitted to remotely monitor all process variables accurately that effect the product in the isolated control room.

#### CURRENT SITUATION:

The TNR is currently manufactured using the same buildings, process and process equipment used in 1942 when the facilities were installed. Continued exposure of the facilities to nitric acid, sulfuric acid and the fumes evolved from these acids has caused the structural members and concrete foundations to deteriorate to such a degree that renovation is uneconomical. Waste from the process is largely sulfuric and nitric acids. The new process dramatically reduces this acidic condition. The present explosive waste is labor intensive and minimal process control. The waste is then pumped to an evaporation lagoon. The fumes from the process are currently discharged directly to the atmosphere. Employees are now exposed to toxic fumes on the average of twice per operating shift. Employees are now manually loading the toxic and acidic chemicals to the reaction kettle in producing the TNR. This exposes them to the hazards of fumes, spills or detonation. Presently all processes require manual operation for loading, washing, packing and neutralization.

1. COMPONENT	THE SECOND STARY CONST			2. DATE
ARMY	FY 1989 MILITARY CONSTR	RUCTION PROJEC	CT DATA	JAN Gel
	N AND LOCATION			
Lake City Arm	y Ammo Plant			
Missouri 4 PROJECT TIME	Bilization Group 1	<u> </u>	15	PROJECT NUMBER
Demolition	eritaacton oroup i		"	TEMP
Relocate & Mo	d TNR Process			T892495
deteriorating property. LCA TNR. ADDITIONAL:	ect is not approved, it wing facilities and manual property of the only Covernment of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contro	cocedures that t installation	endanger capable o	life and f processing
	Lie	nnis E. O'Brien Eutenant Colone Imanding Office	1	

1.	COMPONENT			2. DATE
"		FY 1989 MILITARY CONSTRUCTION PROJECT	DATA	JAN 1987
<u> </u>	ARMY	N AND LOCATION		Jak ioti
La	ke City Arm	y Ammo Plant		
	ssouri			
<b>4</b> .	PROJECT TIPE	ollization Group I	5. F	PROJECT NUMBER
		d TNR Process		TEMP T892495
<u> </u>				1072473
		SUPPLEMENTAL DATA		
		ANNUAL COST TO OPERATE PROPOSED FACILITY		9,000 (\$000)
В.	NUMBER OF	ADDITIONAL PERSONNEL NECESSARY TO CARRY		
	OUL THE FU	NCTION OF THE PROPOSED FACILITY		O (PEOPLE)
c.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(I LOI LL)
	THE DESIRE	D FACILITY		2,295,000
D.	ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(\$000)
		NG FACILITY IF NEW FACILITY IS A		1
	REPLACEMENT	f		2,470,000
		·		(\$000)
Ε.	PLANNING A	ND DESIGN DATA (ESTIMATE)		
l	1. STATUS	NATE DECION CHARTER		MAY 86
	b. 1	DATE DESIGN STARTEDPERCENT COMPLETE AS OF JANUARY 15 1988.		100
		PERCENT COMPLETE AS OF OCTOBER 1 1988		100
	d. 1	DATE DESIGN COMPLETED		DEC 87
	2. BASIS			!
		DARD OR DEFINITIVE DESIGN YES	NO	
	b. WHERE	DESIGN WAS MOST RECENTLY USED:		
	3. COST (TO	TAL - \$000)		
		CTION OF PLANS AND SPECS		
		OTHER DESIGN COSTS		
		ACT		
		OUSE		
	4. CONSTRUC	TION START DATE (PLANNED)		APR 89

1. COMPONENT	FY 1	9 89 MILITARY (	CONSTR	RUCTIC	ON PF	SOJE	CT DA	7A 2. DAT	E		
INSTALLATION A	ND LOC	ATION		4. PROJE	ECT TI	TLE	Mol	oilGrou	pΙ		
Lake City A	Army A	mmo Plant		A:	ltera	atio	n				
Missouri	•			C	overe	ed W	lalkway	Pyro S	tor	age	
. PROGRAM ELEME	NT	6. CATEGORY CODE	7. PROJ	ECT NUM			8. PROJEC	T COST (\$4	000)	·····	
		226 22		T89	92498	3			1,350		
		9. (	COST EST	IMATES							
		ITEM			U/M	au	ANTITY	COST		(\$000)	
	rage	Area - Covers . 38D & 38E		Ī	LS LS				(	814 539 275	
SUPPORT FAC					LS	<del></del>		<del></del>	(	390 160	
Water, S	Sewer	& Gas			LS					3	
Steam, (	Chille	ed Water & Heat Di	st		LS					50	
		s, Curbs & Gutters			LS				$\frac{1}{2}$	65	
Storm Di					LS				Ľ	65	
		25) Demo( )			LS				E	2.5	
Communic	cation	n			LS		 		Ľ	2 (	
Other			<del></del>	<del></del>	L LS				+-	1,204	
SUBTOTAL					i l					.,	

TOTAL CONTRACT COST

TOTAL REQUEST (ROUNDED)

TOTAL REQUEST

CONTINGENCY PERCENT ( 5.00%)

SUPERVISION, INSPECT & OVHD ( 5.50%)

INSTALLED EQUIPMENT-OTHER APPROP

This project totally encloses walkways in the pyrotechnic manufacturing areas where tracer, igniter and incendiary compositions are blended, dryed and stored for small caliber ammunition. Also, two buildings (38D & 38E) will require relocation, barricading and walkways. Demolition of the existing two buildings (38D & 38E) relocated can then be accomplished.

11.	REQUIREMENT:	ADEQUATE:	SUBSTD:	0

PROJECT :

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To enhance personnel safety in the pryotechnic manufacturing area by totally enclosing the walkways at the manufacturing area.

#### REQUIREMENT :

Exposure to operating personnel transporting pyrotechnic materials will be substantially reduced by the placement of a totally enclosed walkway that interconnects the manufacturing and storage buildings. This project will improve the walkways physical condition, thereby giving operating personnel

60

70

0)

1,264

1,334

1.350

1. COMPONENT	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 1.07
Lake City Arm Missouri	•	
4. PROJECT TIPE Alteration	allization Group I	5. PROJECT NUMBER TEMP
Covered Walkw	ay Pyro Storage	T892498

# REQUIREMENT :

(CONT)..

consistent surface to walk and transport over. The elimination of these harsh conditions will remove the need for Grounds Support services to clean and maintain the walkways during inclement weather. The halting of I-136 igniter cake production during rain, due to fire hazard of water reacting with strontium peroxide.

No other facilities at Lake City AAP are capable of manufacturing pyrotechnic materials. Consideration was given to a major consolidation of the storage and manufacturing facilities for pyrotechnic production. This proposal was determined not to be cost effective, when compared to this walkway project.

#### CURRENT SITUATION:

Operating personnel presently are exposed to inclement weather while pushing or carrying explosive pyrotechnic mixtures. Production processes will be delayed due to potential fire hazard and the need for snow and ice removal. Ground Support services are required to clean and maintain the walkways from weather maintenance. Wind blown rain or snow increases the exposure potential of the pyrotechnic materials. Continued exposure to wind chills below freezing is hazardous to the operating personnel transporting the explosive pyrotechnic materials.

### IMPACT IF NOT PROVIDED:

If this project is not approved, it will result in the continued potential fire hazard with the igniter cake from rain exposure. Production delays will continue from the need to remove and clean walkways of snow and ice between the facilities. Operating personnel will continue to be exposed to hazards from the pyrotechnic materials reaction to weather and the inclement weather itself.

# ADDITIONAL:

The construction of walkway enclosures will resolve the problems associated with personnel and material exposure during different types of inclement weather. The elimination of these harsh conditions will remove the need for Ground Support services to clean and maintain the walkways during and after inclement weather. This enables a smooth and unobstructed flow of materials in the pyrotechnic manufacturing and ammunition production areas.

1. COMPONENT				2. D	
ARMY	FY 1989 MILITARY CONSTI	RUCTION PROJEC	T DATA	`	
3. INSTALLATION Lake City Arm	N AND LOCATION				<del></del>
Missouri					
4. PROJECT TIME Alteration	ilization Group l				CT NUMBER
	ay Pyro Storage				92498
This project 23820	is programmed in Modernia	zation as Proje	ct No.	5892498.	JPO:kah
	Lie	nnis E. O'Brien eutenant Colone nmanding Office	1		
ESTIMATED MID	STRUCTION START: POINT OF CONSTRUCTION: STRUCTION COMPLETION:	APRIL OCTOBER APRIL		INDEX	: 1623 : 1650 : 1666

	COMPONENT			
"	COMPONENT	EV 1000 MILITARY CONCERNATION ORGAN		2. DATE
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3.		NAND LOCATION		
		y Ammo Plant		
	ssouri	, 12		
		Filization Group 1	- 5	. PROJECT NUMBER
	teration		"	TEMP
Co	vered Walkwa	ay Pyro Storage		T892498
		SUPPLEMENTAL DATA		
		ANNUAL COST TO OPERATE PROPOSED FACILITY		1,200 (\$000)
В.		ADDITIONAL PERSONNEL NECESSARY TO CARRY		
	OUT THE FU	NCTION OF THE PROPOSED FACILITY		0
	E/IDYL/AMED	1177 AVAIT AAAT TA AAAA TA AAAA AAA		(PEOPLE)
٠.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN		. 0/5 000
l	THE DESIRE	D FACILITY		1,245,000
_	FCTTMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(\$000)
٦.		NG FACILITY IF NEW FACILITY IS A		
1		I		1,405,000
	REFERGEREN	~		(\$000)
l				(3000)
Ε.	PLANNING A	ND DESIGN DATA (ESTIMATE)		
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ł	l. STATUS	DATE DECICE CHARMEN		
}		DATE DESIGN STARTED		MAY 86
i		PERCENT COMPLETE AS OF JANUARY 15 1988.		100
		PERCENT COMPLETE AS OF OCTOBER 1 1988 DATE DESIGN COMPLETED		100 DEC 87
l	<b>a</b> •	DATE DESIGN COMPLETED		DEC 37
ĺ	2. BASIS			
		DARD OR DEFINITIVE DESIGN YES	NO	
1		E DESIGN WAS MOST RECENTLY USED:	110	
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l				
	3. COST (TO	OTAL - \$000)		
		JCTION OF PLANS AND SPECS		
		OTHER DESIGN COSTS		
	c. TOTA	L COST (c) = (a)+(b) OR (d)+(e)		
	d. CONT	RACT		
	e. IN H	DUSE		
				חס ממו
	4. CONSTRUC	CTION START DATE (PLANNED)		APR 89
l				

1. COMPONENT							2. DAT	E	
ARMY	FY 19	9 89 MILITARY C	ONSTR	UCTIO	N PRO	JECT DA	TA		201
3. INSTALLATION A				4. PROJEC	-	-			
	MMA YM	IUNITION PT				zation			
Indiana				Li	ghtn	ing Prot	ection		
5. PROGRAM ELEME	NT	6. CATEGORY CODE	7. PROJE	CT NUMB		8. PROJEC	CT COST (\$0	00)	-
		422 80		TEM 589	12 92 54 7	1		1,8	350
		9. 0	OST EST	MATES					
		ITEM		l	J/M	PANTITY	COST		(\$000)
PRIMARY FA	CILITY								
SUPPORT FA Lightni		ES tection			L\$			(	1,576 1,576)
SUBTOTAL CONTINGENC TOTAL CONT		ENT (10.00%)							1,576 158 1,734
SUPERVISIO TOTAL REQU TOTAL REQU	N, INS EST EST (F	SPECT & OVHD ( 5.5	0%)					(	95 1,829 1,850
with AMCR associated ground grid loading and crating sh	w and 385-10 cabli d syst d unlo	upgrade existing  O. Work to includ  ng; installation  ems; and installa  adding areas at 7  O igniter rest holding docks.	e insta of new tion o traile	allatio and/or f syste r pads,	on of the em tes , 26 s	lightni upgrade sting po service n	ng arres of exis ints for nagazine	tors ting tra	s and S siler
	updat	SF A ed lightning prot ordance with AMCR		for mo	obile		UBSTD: l handli	ng	SF

1. COMPONENT  ARMY	FY 1989MILITARY CONSTRUCTION PROJECT DATA	2. DATE 321, 1687
3. INSTALLATION	N AND LOCATION AMMUNITION PT	
Indiana		
4. PROJECT TITL		5. PROJECT NUMBER
Modernization		TEMP
Lightning Pro	tection	5892547

# REQUIREMENT:

This project is required to correct lightning protection deficiencies.

# CURRENT SITUATION:

Currently, lightning protection is not adequate to provide protection to mobile material handling equipment being used during loading or unloading of ammunition items/components.

### IMPACT IF NOT PROVIDED:

If this project is not provided, mobile material handling equipment will not have lightning protection, with consequent risk to both personnel and equipment.

#### ADDITIONAL :

An economic analysis is not necessary for the project. All potential alternatives were examined in the development of the project and none were found to be feasible.

/S/ TRANNIE W. SANDERSON TRANNIE W. SANDERSON LTC, CM Commanding

ESTIMATED CONSTRUCTION START: JANUARY 1989 INDEX: 1616
ESTIMATED MIDPOINT OF CONSTRUCTION: FEBRUARY 1990 INDEX: 1662
ESTIMATED CONSTRUCTION COMPLETION: MARCH 1991 INDEX: 1706

1. (	COMPONENT			2. DATE
		FY 1989 MILITARY CONSTRUCTION PROJECT	DATA	ja ja 122.
	ARMY			
		N AND LOCATION AMMUNITION PT		
Ind	iana			
4. 5	PROJECT TITL	5.	PROJECT NUMBER TEMP	
	htning Pro		5892547	
				J0/25
		SUPPLEMENTAL DATA		ļ
Α.	ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		0
				(\$000)
В.	NUMBER OF .	ADDITIONAL PERSONNEL NECESSARY TO CARRY		
į	OUT THE FU	NCTION OF THE PROPOSED FACILITY		0
	POTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
		D FACILITY		0
l	THE DESTRE	D FACIBILITY		(\$000)
D.	ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		,,,
	THE EXISTI	NG FACILITY IF NEW FACILITY IS A		
	REPLACEMEN'	T		0
}		•		(\$000)
ធ	DIAMNING A	ND DESIGN DATA (ESTIMATE)		
Ε.	FLANNING A.	ND DESIGN DATA (ESTIMATE)		
l	1. STATUS			
		DATE DESIGN STARTED		
	b.	PERCENT COMPLETE AS OF JANUARY 15 1988		100
ļ		PERCENT COMPLETE AS OF OCTOBER 1 1988		100
1	d.	DATE DESIGN COMPLETED		NOV 87
<u>[</u>	2. BASIS			
•		DARD OR DEFINITIVE DESIGN YES	NO X	
		E DESIGN WAS MOST RECENTLY USED:		
1				
•				
		OTAL - \$000)		
1		UCTION OF PLANS AND SPECS		167
		L COST (c) = $(a)+(b)$ OR $(d)+(e)$		167
		RACT		115
		OUSE		52
1	•			<b>~</b> -
1	4. CONSTRU	CTION START DATE (PLANNED)		JUN 89
1				

1. COMPONENT	FY 19	89	MILITARY	CONST	RUCTIO	N PR	OJECT DA	2. DA1	E .	:337
. INSTALLATION AF HOLSTON ARM Tennessee .PROGRAM ELEME	Y AMMU	NITIO	ON PT11212	12 BBO	1 -	dern D Li	ization ne 10, Com		~~	
78011A			226 90		007	2000	i			300
<del></del>		ı	TEM	COST ES	TIMATES	U/M	QUANTITY	UNIY COST		COST (9000)
PRIMARY FAC New Const Alteratio	ructio		ion			LS LS		<del></del> 	(	4,453 1,640 2,813
	Walks,	Curl	os & Gutters Site Work	- <u>, , , , , , , , , , , , , , , , , , ,</u>		LS LS			(	299 53 246

TOTAL CONTRACT COST

TOTAL REQUEST (ROUNDED)

TOTAL REQUEST

CONTINGENCY PERCENT ( 5.00%)

SUPERVISION, INSPECT & OVHD ( 5.50%)

INSTALLED EQUIPMENT-OTHER APPROP

SUBTOTAL

New construction, alteration, conversion, utilities services, paving and site work as required to modernize A-Composition production facilities on Line 10. Demolish five (5) substandard buildings (14,480 SF).

11.	REQUIREMENT:	SF	ADEQUATE:	SF	SUBSTD:	0	SF
PRO	IFCT ·						

Modernize A-Composition production facilities on Line 10.

### REQUIREMENT :

This project is required to establish sufficient production capability to meet mobilization end-product outpost levels for A-Composition explosives and to enhance production worker safety.

4,752

4,990

5,264

5,300

21,247)

238

274

1. COMPONENT	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 1987						
3. INSTALLATION	3. INSTALLATION AND LOCATION HOLSTON ARMY AMMUNITION PT11212							
4. PROJECT TITL Modernization MOD Line 10,		5. PROJECT NUMBER						

# CURRENT SITUATION :

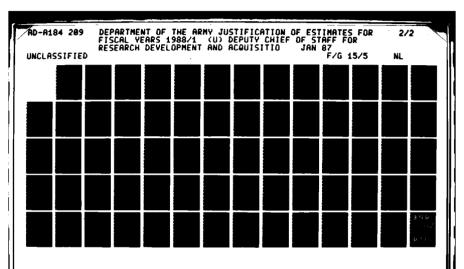
Line 10 is now configured for batch type production of B-Composition explosive and is presently in layaway. Modernization of Line 10 for A-Compositions manufacture is necessary to meet established modernization production rates. Holston is the sole producer of RDX explosives in the United States. Compositions A-3, A-4 and A-5 are coated RDX products used in press-loaded munitions.

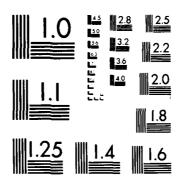
### IMPACT IF NOT PROVIDED:

If this project is not provided, the mobilization production levels for A-Composition explosives cannot be met and the existing batch process production facilities will continue to pose higher than necessary risks to production worker safety.

/S/ JAMES F. BALD, JR
JAMES F. BALD, JR
LTC, OD
Commanding

ESTIMATED CONSTRUCTION START: APRIL 1989 INDEX: 1623
ESTIMATED MIDPOINT OF CONSTRUCTION: JUNE 1990 INDEX: 1674
ESTIMATED CONSTRUCTION COMPLETION: SEPTEMBER 1991 INDEX: 1725





MICROCOPY RESOLUTION TEST CHART NATIONAL BUREAU OF STANDARDS-1963-A

1. COMPONENT			2. DATE
	FY 1989MILITARY CONSTRUCTION PROJECT DA	ATA	jan 1987
ARMY	N AND LOGATION		<u> </u>
	NAND LOCATION AMMUNITION PT11212		
Tennessee	minoration if figure		
4. PROJECT TITL		5. 1	PROJECT NUMBER
Modernization			
MOD Line 10,	Comp A-5		0072000
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		UNK
B. NUMBER OF	ADDITIONAL PERSONNEL NECESSARY TO CARRY		(\$000)
	UNCTION OF THE PROPOSED FACILITY		UNK
			(PEOPLE)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		
THE DESIRE	D FACILITY		UNK
D. FSTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(\$000)
1	NG FACILITY IF NEW FACILITY IS A		
REPLACEMEN	iT		
	<u>,                                    </u>		(\$000)
F DIAMNING A	ND DESIGN DATA (ESTIMATE)		
E. FLANNING A	THE DESIGN DATA (ESTIMATE)		
1. STATUS	•		
6	DATE DESIGN STARTED		AUG 86
	PERCENT COMPLETE AS OF JANUARY 15 1988.		100
	PERCENT COMPLETE AS OF OCTOBER 1 1988  DATE DESIGN COMPLETED		100 AUG 87
•	DATE DESIGN CONFECTED		RUG 67
2. BASIS			
		NO X	
•	E DESIGN WAS MOST RECENTLY USED:		
N/A			
3. COST (1	OTAL - \$000)		
a. PROI	OUCTION OF PLANS AND SPECS		165
_	OTHER DESIGN COSTS		261
	L COST (c) = (a)+(b) OR (d)+(e)		426
	RACT		205 221
4. CONSTRU	CTION START DATE (PLANNED)		FEB 89
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1. COMPONENT 2. DATE JAN 1987 FY 1989 MILITARY CONSTRUCTION PROJECT DATA **ARMY** 3. INSTALLATION AND LOCATION HOLSTON ARMY AMMUNITION PT--11212 Tennessee 5. PROJECT NUMBER 4. PROJECT TITLE Modernization MOD Line 10, Comp A-5 0072000 F. EQUIPMENT ASSOCIATED WITH THIS PROJECT WHICH WILL BE PROVIDED FROM OTHER APPROPRIATIONS **EQUIPMENT** PROCURING FY OF COST NOMENCLATURE APPROPRIATION APPROP (\$000) Ammo Production Eq PAA 87 19700

1. COMPONENT	<b>FY 19</b> 89	MILITARY C	ONCT		281.00	O IECT DAS	2. DATE	
ARMY	FT 19 89	MILITARY	ONS I F	NOC I I	JN PF	TOJECT DA	'^	IEN 1987
3. INSTALLATION AND	DLOCATION			4. PROJ	ECT TI	TLE Mot	ilGroup	1
INDIANA ARMY		ON PT	L.	diti			_	
Indiana			L.		e/Rds-Phas	e V		
S. PROGRAM ELEMEN	T 6. CAT	EGORY CODE	7. PROJ	ECT NUN			T COST (800	<u>~</u>
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		421 81	1	533	30/13	1		300
	•	9. 0	OST EST	IMATES				
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							COST	
PRIMARY FACI								256
Shiphse/Rd	s-Phase V				SF	38,202	6.70	( 256)
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SUPPORT FACI	LITIES				} }	•	ł	
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SUBTOTAL								256
CONTINGENCY	PERCENT (	(0.00%)						26
TOTAL CONTRA		- 3			[		}	282
	<del>-</del> -	OVHD ( 5.50	%)			Į		16
TOTAL REQUES			- *		[ ]	ļ		298
TOTAL REQUES		D)				ļ		300
INSTALLED EQ						ļ		( 17)
<b>-</b>	•	-					ł	

Phase V will provide for the building of access roads, the purchase of one portable ramp and the reinforcing of floors to sixteen (16) rail shiphouses.

11. REQUIREMENT: 155,283 SF ADEQUATE: 119,914 SF SUBSTD: 35,369 SF PROJECT:

To convert sixteen (16) limited access Rail Shiphouses to prime explosive storage locations.

# REQUIREMENT:

Access roads are needed for trailer truck access to existing shiphouses that have only rail access, for end-product storage requirements.

# CURRENT SITUATION:

Currently, the shiphouses are loaded in two stages. First, by manual transfer of propellant from an intraplant trailer to a rail jitney car and then by manual transfer from the jitney car into the shiphouse. Direct

1. COMPONENT		2. DATE
ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	JAN 1987
INDIANA ARMY' Indiana	N AND LOCATION AMMUNITION PT	
4. PROJECT TIME Addition Shiphse/Rds-P		5. PROJECT NUMBER TEMP 5330/13

#### **CURRENT SITUATION:**

(CONT)..

trailer access eliminates one transfer operation. Floor reinforcement is required for forklift transfer of goods.

#### IMPACT IF NOT PROVIDED:

Failure to provide this project will necessitate the continued costly manipulating and rewarehousing of explosive inventories. Additional hiring of material handling personnel will be required to keep up with the rate of Class 1.3 storage turnover and more people than necessary will be exposed to hazards of manually handling explosives. Critically needed prime explosive storage space to comply with the ballistic acceptance procedures in SB 742-1, ammunition surveillance procedures for finished goods produced will be lacking at INAAP if this project is not provided.

#### ADDITIONAL:

Presently, INAAP has 238 Class 1.3 facilities. Increased production schedules for 1986-88 will require that all 238 Class 1.3 facilities be utilized equally and that an estimated 1,217 load or unload operations will be required annually. It is estimated that an annual savings of \$415,301 will be realized. Additionally, approximately 150 hours will be saved for quality assurance, content surveillance, inventory check and maintenance personnel.

/S/ TRANNIE W. SANDERSON TRANNIE W. SANDERSON LTC, CM Commanding

ESTIMATED CONSTRUCTION START: APRIL 1989 INDEX: 1623 ESTIMATED MIDPOINT OF CONSTRUCTION: OCTOBER 1989 INDEX: 1650 ESTIMATED CONSTRUCTION COMPLETION: APRIL 1990 INDEX: 1666

1. COMPONENT 2. DATE							
	ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT D	ATA	1987 NAL			
3.		N AND LOCATION					
		AMMUNITION PT					
	I i ana	gilization Group 1	- 1	5. PROJECT NUMBER			
	lition	E		TEMP			
Shi	iphse/Rds-P	hase V		5330/13			
		SUPPLEMENTAL DATA					
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В.		ADDITIONAL PERSONNEL NECESSARY TO CARRY NCTION OF THE PROPOSED FACILITY		0			
	OUI THE FU		(PEOPLE)				
c.	ESTIMATED		•				
	THE DESIRE		0 (\$000)				
D.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN					
	THE EXISTI		0				
	KEI BROUILIN	T		(\$000)			
F	DI ANNING A	ND DESIGN DATA (ESTIMATE)					
-	I DAMINING A	ND DESTON DATA (BOTTMILL)					
	1. STATUS	DATE DESIGN STARTED					
1		PERCENT COMPLETE AS OF JANUARY 15 1988.		100			
		PERCENT COMPLETE AS OF OCTOBER 1 1988.		100			
Į	d.	DATE DESIGN COMPLETED		NOV 87			
l	2. BASIS						
		DARD OR DEFINITIVE DESIGN YES LE DESIGN WAS MOST RECENTLY USED:	NO X				
	INA						
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		UCTION OF PLANS AND SPECS					
		OTHER DESIGN COSTS		27			
		L COST (c) = (a)+(b) OR (d)+(e)		27 19			
		OUSE		8			
	4. CONSTRU	CTION START DATE (PLANNED)		JUN 89			
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1. COMPONENT 2. DATE AN 1901 FY 1989 MILITARY CONSTRUCTION PROJECT DATA **ARMY** 3. INSTALLATION AND LOCATION INDIANA ARMY AMMUNITION PT Indiana 4. PROJECT TIME ilization Group 1 5. PROJECT NUMBER TEMP Addition Shiphse/Rds-Phase V 5330/13 F. EQUIPMENT ASSOCIATED WITH THIS PROJECT WHICH WILL BE PROVIDED FROM OTHER APPROPRIATIONS EQUIPMENT PROCURING FY OF COST APPROPRIATION APPROP NOMENCLATURE (\$000) 89 Portable Ramps, one PA, A 4211 17.0

1. COMPONENT									2. DA	re	
FY 19		89	MILITARY C	RY CONSTRUCTION PROJECT DATA JAN 1987							- 1
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3. INSTALLATION AN			ON DE		4. PROJ	ECT TI	TLE				
INDIANA ARM	MMA YM	UNITI	ON PI		,	EMCS					
Indiana  5. PROGRAM ELEME	NT	R CATI	EGORY CODE	י פפר ל	ECT NUM			le epois	T COST (\$	000)	
U. T NOUNAM ELEME		U. CA16	SOULL CODE	, Phoj		EMP		S. PROJEC	. Cosi (a	<del>5551</del>	
			800 00	1	53	30/5	1			840	
				OST EST	IMATES						
-		1	TEM			U/M/	Œ	janfify	COST	(\$000	
PRIMARY FACII Enrgy Monit	LITY tor Co	ntrl	Syst			LS			(	724	)
SUPPORT FACII	LITIES										
SUBTOTAL CONTINGENCY I TOTAL CONTRAC SUPERVISION, TOTAL REQUEST TOTAL REQUEST INSTALLED EQU	CT COS INSPE I (ROU	T CT & NDED)	OVHD ( 5.50%)						(	724 72 796 44 840 . 840	; ;

This project consists of replacing the existing Energy Monitoring and Control System (EMCS) with one that will provide enhanced and expanded capabilities. The EMCS (with 2,000 points) will control package boilers at 24 locations, one furnace, chiller systems in 18 buildings, air handling units in 27 buildings, compressors in 9 locations, and area lighting systems in 10 buildings. Steam consumption will be controlled with connections to main steam supply valves supplying 9 buildings, to steam reducing valves supplying 9 buildings, and with connections to valve pits in 6 additional buildings. The EMCS will also provide temperature setback capability in 15 buildings and monitor electrical metering field equipment in 46 locations. EMCS field equipment will be installed in a compatible manner with the existing equipment with wired connections to local Field Interface Devices (FIDs). FIDs will use either FM or telephone links to the Master Control Room (MCR). The MCR will contain the Central Processing Unit (CPU), peripherals, software, etc. Software provided will optimize the energy consumption of controlled equipment. Employee training will be provided.

1. COMPONENT
ARMY
FY 19<sup>89</sup> MILITARY CONSTRUCTION PROJECT DATA

3. INSTALLATION AND LOCATION
INDIANA ARMY AMMUNITION PT
Indiana
4. PROJECT TITLE
EMCS

2. DATE

: JAN 1987

5. PROJECT NUMBER
5330/51

11. REQUIREMENT:

LS ADEQUATE:

LS SUBSTD:

0 LS

PROJECT :

This project will provide a plantwide EMCS for INAAP.

### REQUIREMENT:

Wide-ranging energy conservation measures will be implemented, decreasing energy consumption. Implementation will help meet energy goals, mandated energy reduction requirements, supporting AMCCOM Policy 11-4 (July 1985).

#### **CURRENT SITUATION:**

This need is currently not being met due to the fact that no EMCS is available to provide the needed controls.

### IMPACT IF NOT PROVIDED:

Failure to approve this project will result in continued use of large quantities of energy, the annual equivalent of 7,981 barrels of oil.

# ADDITIONAL:

The reduced energy consumption amounts to an annual savings of 9,389 MWH/YR in electricity, 49,501 gal/yr of No. 2 fuel oil, and 2,893 MCF of natural gas. An annual FY86 dollar savings of \$55,613 in NO. 2 fuel oil, \$177,945 in natural gas and \$435 in labor is estimated. This amounts to an annual cost avoidance of \$298,786. Implementation will reduce energy consumption by 46,487 MBTU/yr.

/S/ TRANNIE W. SANDERSON TRANNIE W. SANDERSON LTC, CM Commanding

ESTIMATED CONSTRUCTION START: JANUARY 1989 INDEX: 1616 ESTIMATED MIDPOINT OF CONSTRUCTION: JULY 1989 INDEX: 1636 ESTIMATED CONSTRUCTION COMPLETION: JANUARY 1990 INDEX: 1660

1. COMPONEN		2. DATE
ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	JAN 1987
3. INSTALLATI	ON AND LOCATION AMMUNITION PT	•
Indiana	AMMUNITION PI	
4. PROJECT TI	TLE	5. PROJECT NUMBER
EMCS	·	TEMP 5330/51
		3330,52
	SUPPLEMENTAL DATA	
A. ESTIMATE	O ANNUAL COST TO OPERATE PROPOSED FACILITY	29.6 (\$000)
B. NUMBER OF	ADDITIONAL PERSONNEL NECESSARY TO CARRY	(4000)
OUT THE I	TUNCTION OF THE PROPOSED FACILITY	(PEOPLE)
C. ESTIMATE	LIFE-CYCLE COST TO OPERATE AND MAINTAIN	(PEOPLE)
	RED FACILITY	269.9
D FOTIMATE!	LIFE-CYCLE COST TO OPERATE AND MAINTAIN	(\$000)
	TING FACILITY IF NEW FACILITY IS A	
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]	•	(\$000)
E. PLANNING	AND DESIGN DATA (ESTIMATE)	
1. STATUS		
	DATE DESIGN STARTED	ı
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	PERCENT COMPLETE AS OF OCTOBER 1 1988	100
d.	DATE DESIGN COMPLETED	Dec 87
2. BASIS	•	
	ANDARD OR DEFINITIVE DESIGN YES NO	X
D. WHI	TRE DESIGN WAS MOST RECENTLY USED:	
3 COST (	TOTAL - \$000)	
	DUCTION OF PLANS AND SPECS	
1	OTHER DESIGN COSTS	76
1	$CAL\ COST\ (c) = (a)+(b)\ OR\ (d)+(e)$	76
	VTRACT	53
e. IN	HOUSE	23
4. CONSTI	RUCTION START DATE (PLANNED)	Jun 89
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1. COMPONENT		2. DATE
ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	1987 JAN 1987
3. INSTALLATION INDIANA ARMY	AND LOCATION	
Indiana	MINITION II	
4. PROJECT TITL		5. PROJECT NUMBER
EMCS		TEMP 5330/51
	ASSOCIATED WITH THIS PROJECT WHICH WILL BE	
PROVIDED F	ROM OTHER APPROPRIATIONS	
EQUIPMENT	PROCURING FY OF COST	
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1. COMPONENT	FY 1	9 89 MILITARY C	ONSTRUC	TION P	ROJE	ECT DA		-	.07
ARMY							•	j: ', 19	101
3. INSTALLATION A			4. P	ROJECT T	ITLE				
	AMMUN	NITION PLANT						_ ,	_
Kansas					ruc t	ion Co	mmercial	Truc	k Do
5. PROGRAM ELEME	NT	6. CATEGORY CODE	7. PROJECT	NUMBER TEMP	Ĩ	8. PROJE	CT COST (80	(00)	
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		<del></del>	I OST ESTIMA		<u> </u>			230	
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		115m		0/8	40	ANIIIT	COST	(84	DOO)
PRIMARY FAC	ILITY	<del></del>							210
Construct	Comme	ercial Truck Docks		LS	1			K	210)
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		PECT & OVHD ( 5.50	%)		,				12
TOTAL REQUE		. 201 6 01 ( ) 1 ) 0	,,,		}		ļ		233
TOTAL REQUE		OUNDED)							230
		ENT-OTHER APPROP					İ	(	0)
									,
10. Description of Prop	osed Con	struction	<del></del>			<del></del>	L	<u> </u>	
Construct c	ommer	cial truck docks t	o suppor	t wareh	ousi	ng ope	rations	in the	e
1400 Area t	o prov	vide concrete dock	and dou	ble tru	ck w	ells b	etween I	Buildi	ng s
1412-13, 14	14-15	and 1415-16 compl	ete with	proper	dra	inage,	dock bu	mper .	and
dock levele	rs.								
11. REQUIRE	MENT:	ls AD	EQUATE:			ls SU	BSTD:	0	ls
PROJECT:		/a\		_		• . •			
		(3) double well tr	uck dock	s compl	ete	with p	roper di	rainag	e,
dock bumper	and	dock levelers.							
DE 007 DEWENT									
REQUIREMENT				ا - ماد ما	<b>c</b> -	1	٠٠ ـ ـــــــــــــــــــــــــــــــــ		_
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wnien would	reau	ce material handli	ng and r	eu uce c	USES	•			

1. COMPONENT	FY 1989 MILITARY CONSTRUCTION PROJ	2. DATA 2. DATE 1987
	N AND LOCATION MMUNITION PLANT	
4. PROJECT TITE		5. PROJECT NUMBER TEMP
Construction	Commercial Truck Docks in 1	532919

## **CURRENT SITUATION:**

The warehouses in 1400 Area are ground level type structures which require double handling of materials received by commercial truck.

### IMPACT IF NOT PROVIDED:

Warehousing operations would still require double handling of materials received in-plant by commercial truck.

/S/ CHARLES T. WALLSCHLAEGER
CHARLES T. WALLSCHLAEGER
LTC, Ord C
Commanding

ESTIMATED CONSTRUCTION START: APRIL 1989 INDEX: 1623
ESTIMATED MIDPOINT OF CONSTRUCTION: OCTOBER 1989 INDEX: 1650
ESTIMATED CONSTRUCTION COMPLETION: APRIL 1990 INDEX: 1666

1.	COMPONENT			2. DATE				
l	ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT D	ATA	JAN 1987				
	INSTALLATIO	N AND LOCATION						
	NSAS ARMY Al nsas	MUNITION PLANT						
	4. PROJECT TITLE 5. PROJECT NUMBER							
Ca	nstruction (	Commercial Truck Docks in 1		TEMP 532919				
<u> </u>		Sommer Clair It de R Boeks In 1		332717				
l								
		SUPPLEMENTAL DATA						
Α.	ESTIMATED A	ANNUAL COST TO OPERATE PROPOSED FACILITY		0 (\$000)				
В.		ADDITIONAL PERSONNEL NECESSARY TO CARRY						
	OUI THE FUI	NCTION OF THE PROPOSED FACILITY		(PEOPLE)				
c.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN						
	THE DESIKE	FACILITY		8500 (\$000)				
D.		LIFE-CYCLE COST TO OPERATE AND MAINTAIN NG FACILITY IF NEW FACILITY IS A		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
	REPLACEMENT	[		0 (\$000)				
Ε.	PLANNING A	ND DESIGN DATA (ESTIMATE)						
	1. STATUS	,						
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1		PERCENT COMPLETE AS OF OCTOBER 1 1988		100				
	d. 1	DATE DESIGN COMPLETED		nov 87				
1	2. BASIS							
		DARD OR DEFINITIVE DESIGN YES N E DESIGN WAS MOST RECENTLY USED:	10					
l	3. COST (TO	OTAL - \$000)						
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İ		DTHER DESIGN COSTS		21,000 21,000				
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	e. IN H	DUSE		21000				
	4. CONSTRUC	CTION START DATE (PLANNED)		apr 89				
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ARMY  3. INSTALLATION AND LOCATION LAKE CITY ARMY ANMO PLANT Missouri  5. PROGRAM ELEMENT  FY 19 89 MILITARY CONSTRUCTION PROJECT DATA  APROJECT TITLE  SUBTOTAL  CONTINGENCY PERCENT (10.00%)  TOTAL CONTRACT COST SUBPERVISION, INSPECT & OVHD (5.50%)  TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST TOTA										
ARMY  LAKE CITY ARMY AMMO PLANT Missouri  E. PROJECT YILE Mobil GROUP 3  Replace Oil Storage Tank  S. PROJECT COST (SOUND)  SOUND TEMP  S21 90  S. COST ESTIMATES  ITEM  DVM GUANTITY  Replacement of Fuel Oil Tank  LS  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SPROJECT VANA  Replace Oil Stocal Tank  Replace Oil Stocal Tank  Repl	1. COMPONENT	EV 10	0 89 MILITARY C	ONSTRUCT	ON PE	90 II	ECT DA	1		1007
AND PRIMARY FACILITIES    SUBTOTAL CONTINGENCY PERCENT (10.00%) TOTAL CONTRACT COST (00.00%) INSTALLED EQUIPMENT-OTHER APPROP   Disconnect all steam, oil and steam condensate pipe lines from the existing concrete storage tank. Disconnect all light circuits and the electronic fuel oil level measuring device from electrical service. Demolish the tank and foundation, and remove all heating facilities from the rubble. Dispose of all piping and concrete rubble in accordance with the latest requirements for disposal of materials coated with a potential hazardous waste. Provide a new foundation and construct an all steel 223,000 gallon storage tank on the cleared site complete with tank steam heating coils, steam suction heater, connected steam, transfer oil piping and lighting. Provide new electronic oil level measuring equipment. Test the existing soil and remove any oil-contaminated soil. The new steel tank shall be equipped with cathodic protection.	ARMY	F 1 1	9 07 MILITARI C	ONS I NOC I	ONT	1001	בטו טב	'^	JAN	1337
Replace Oil Storage Tank  8. PROGRAM ELEMENT	3. INSTALLATION AN	ND LOCA	TION	4. PRO	JECT TI	TLE	Мо	bil GROUE	3	
SUBTOTAL CONTINGENCY PERCENT (10.00%) SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT	LAKE CITY A	RMY AN	MMO PLANT							
SUBTOTAL CONTINGENCY PERCENT (10.00%) TOTAL CONTRACT COST SUPERVISION, INSPECT & OVHD (5.50%) TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST (ROUNDED) INSTALLED EQUIPMENT-OTHER APPROP  Disconnect all steam, oil and steam condensate pipe lines from the existing concrete storage tank. Disconnect all light circuits and the electronic fuel oil level measuring device from electrical service. Demolish the tank and foundation, and remove all heating facilities from the rubble. Dispose of all piping and concrete rubble in accordance with the latest requirements for disposal of materials coated with a potential hazardous waste. Provide a new foundation and construct an all steel 223,000 gallon storage tank on the cleared site complete with tank steam heating coils, steam suction heater, connected steam, transfer oil piping and lighting. Provide new electronic oil level measuring equipment. Test the existing soil and remove any oil-contaminated soil. The new steel tank shall be equipped with cathodic protection.	Missouri			1	Replac	ce C	il Sto	rage Tar	ık	
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PRIMARY FACILITY Replacement of Fuel Oil Tank  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  247  255  272  272  287  TOTAL REQUEST (ROUNDED)  INSTALLED EQUIPMENT-OTHER APPROP  10. Description of Procooled Construction  Disconnect all steam, oil and steam condensate pipe lines from the existing concrete storage tank. Disconnect all light circuits and the electronic fuel oil level measuring device from electrical service. Demolish the tank and foundation, and remove all heating facilities from the rubble. Dispose of all piping and concrete rubble in accordance with the latest requirements for disposal of materials coated with a potential hazardous water. Provide a new foundation and construct an all steel 223,000 gallon storage tank on the cleared site complete with tank steam heating coils, steam suction heater, connected steam, transfer oil piping and lighting. Provide new electronic oil level measuring equipment. Test the existing soil and remove any oil-contaminated soil. The new steel tank shall be equipped with cathodic protection.				1 -						
PRIMARY FACILITY Replacement of Fuel Oil Tank  SUBTOTAL CONTINCENCY PERCENT (10.00%) TOTAL CONTRACT COST SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  SUPPORT FACILITIES  1247 CONTINCENCY PERCENT (10.00%) 255 TOTAL CONTRACT COST 272 TOTAL REQUEST (ROUNDED) 15 287 TOTAL REQUEST (ROUNDED) 10. Description of Promosed Construction  Disconnect all steam, oil and steam condensate pipe lines from the existing concrete storage tank. Disconnect all light circuits and the electronic fuel oil level measuring device from electrical service. Demolish the tank and foundation, and remove all heating facilities from the rubble. Dispose of all piping and concrete rubble in accordance with the latest requirements for disposal of materials coated with a potential hazardous waste. Provide a new foundation and construct an all steel 223,000 gallon storage tank on the cleared site complete with tank steam heating coils, steam suction heater, connected steam, transfer oil piping and lighting. Provide new electronic oil level measuring equipment. Test the existing soil and remove any oil-contaminated soil. The new steel tank shall be equipped with cathodic protection.	<del></del>			عيد تحصيب عبد عبد		7 ·			29	0
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1. COMPONENT		2. DATE
ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	JAN 1987
Missouri	N AND LOCATION IY AMMO PLANT	
	Pilization GROUP 3	5. PROJECT NUMBER TEMP
Replace Oil S	torage Tank	5332-17

Construct a new all steel fuel oil storage tank, approximately 223,000 gallons capacity with a steam heating devices, piping, and oil level measuring equipment that complies with AMC-R 385-100, NFPA codes, State and Federal requirements.

# REQUIREMENT:

A new steel tank of approximately 223,000 gallons capacity is required to maintain a 30 day storage capacity for fuel oil as required to comply with AR 420-49. One (1) reinforced concrete storage tank. No 79 will be disposed of as result of this project. Accomplishment of this supproject will eliminate a potential source of environmental pollution of soil and water.

### CURRENT SITUATION:

The existing storage tank was constructed in 1942 of reinforced concrete, formed in place. The concrete has become saturated with oil over the years, and oil is seeping to the outside and down the sides of the tank creating a potential pollution and fire hazard. The leaks cannot be repaired and replacement is required. The Missouri Department of Natural Resources (MDNR) Law 10 CSR 24-4.0-20, Waste Oil, states that waste oil is a hazardous waste. A hazardous waste with a potential to pollute groundwater cannot, in the State of Missouri, be allowed to leak or spill onto the ground. The Environmental Protection Agency Hazardous Waste and Consolidated Permit Regulation (Federal Register), Subpart C--Preparedness and Prevention, 264.31 Design and Operation of Facility, states facilities must be designed, constructed, maintained, operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

# IMPACT IF NOT PROVIDED:

In the event this project is not approved, the production schedules assigned for mobilization could be affected adversely and the Plant will remain not in compliance with AR 420-49. Beneficial Occupancy Date: M+5

### ADDITIONAL:

Cost is shown in FY89 dollars. The Corps of Engineers CWE cost with escalation was used. This subproject has a completed design as PSR Project 5845332, Subproject 24. This subproject is currently programmed as PSR Project 5895332, Subproject 17.

1. COMPONENT 2. DATE FY 1989 MILITARY CONSTRUCTION PROJECT DATA JAN 1987 **ARMY** 3. INSTALLATION AND LOCATION LAKE CITY ARMY AMMO PLANT Missouri 4. PROJECT TIME ilization GROUP 3 5. PROJECT NUMBER TEMP Replace Oil Storage Tank 5332-17 (CONT).. ADDITIONAL : KLC:kah 6294 /S/ DENNIS E. O'BRIEN DENNIS E. O'BRIEN LTC, OD Commanding Officer ESTIMATED CONSTRUCTION START: APRIL 1989 INDEX: 1623 ESTIMATED MIDPOINT OF CONSTRUCTION: ... OCTOBER 1989 INDEX: 1650 APRIL INDEX: 1666 ESTIMATED CONSTRUCTION COMPLETION: 1990

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1. COMPONENT	FV 19	89	MILITARY O	ONST	RUCTIO	ON PE	ROJE	CT DA			
ARMY						<b>5</b> 11			```	JAN 19	8/
3. INSTALLATION A		_			4. PROJ	ECT TI	TLE		, ,		
Milan Army	Ammuni	tion	Plant								
Tennessee					H	AZ. 1	MAT.	STG.	BLDGAF	REA S	
5. PROGRAM ELEMEI	NT	6. CAT	GORY CODE	7. PROJ	ECT NUN			8. PROJEC	T COST (80	00)	
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#### 10. Description of Proposed Construction

PROVIDE A SPECIALLY DESIGNED BUILDING THAT WILL MEET ALL STATE AND FEDERAL REQUIREMENTS FOR THE STORAGE OF HAZARDOUS AND TOXIC MATERIALS. THE PROPOSED STRUCTURE WILL BE SINGLE STORY, WITH FINISH FLOOR SET AT TRAILER HEIGHT. EXISTING AREA ROADS CAN BE UTILIZED FOR ACCESS, BUT TRUCK APRONS AT EACH CARGO DOOR WILL BE REQUIRED. ELECTRICAL SERVICE FOR LIGHTING AND HEAT SUFFICIENT TO PREVENT FREEZING WILL BE REQUIRED. NO OLD FACILITIES WILL BE DISPOSED OF. NOT SITED IN A FLOOD PLAIN.

11.	REQUIREMENT:			SF ADEQUATE:		0	SF	SUBSTD:	13	055	SF
PRO.	JECT :										
TUI	TITU TOTIOGG 2	DROWIDE	A	BUILDING THAT	LITIT	MEET	THE	DEVILLBENE	MTC	OΕ	

THIS PROJECT WILL PROVIDE A BUILDING THAT WILL MEET THE REQUIREMENTS OF EXISTING ARMY REGULATIONS AND DEPARTMENT OF DEFENSE DIRECTIVES FOR THE STORAGE OF HAZARDOUS AND TOXIC MATERIALS.

1. COMPONENT		2. DATE							
ARMY	FY 19 <u>89 MILITARY CONSTRUCTION PROJECT DATA</u>	JAN 1987							
Milan Army Am	3. INSTALLATION AND LOCATION Milan Army Ammunition Plant								
Tennessee									
4. PROJECT TITL	E	5. PROJECT NUMBER							
		TEMP							
HAZ. MAT. STG	. BLDGAREA S	5317-18							

# REQUIREMENT:

NO APPROVED FACILITY EXISTS FOR THE STORAGE OF HAZARDOUS AND TOXIC MATERIALS. NO PROVISIONS FOR SPILL CONTAINMENT IS PROVIDED AND COMPATABILITY GROUPINGS ARE NOT SEPERATED IN THE PERSCRIBED MANNER.

# **CURRENT SITUATION:**

CURRENTLY ONE (1) WAREHOUSE AND AN EARTH COVERED MAGAZINE ARE USED TO STORE ALL HAZARDOUS AND TOXIC MATERIALS USED AT THIS INSTALLATION. THE WAREHOUSE IS UNHEATED AND DOES NOT MEET THE REQUIREMENTS OF AR 200-1 FOR THE STORAGE OF HAZARDOUS AND TOXIC MATERIALS. LIKEWISE THE EARTH COVERED MAGAZINE DOES NOT MEET THE STATED REQUIREMENTS AND IS BEING USED FOR STORAGE OF ITEMS OTHER THAN THOSE FOR WHICH IT WAS DESIGNED NAMELY EXPLOSIVES AND EXPLOSIVE COMPONENTS.

## IMPACT IF NOT PROVIDED:

THIS INSTALLATION WILL CONTINUE TO BE IN VIOLATION OF AR 200-1 AND OTHER DOD DIRECTIVES CONCERNING STORAGE OF HAZARDOUS AND TOXIC MATERIALS.

/S/ KENNARD G. KARR
KENNARD G. KARR
LTC ORDC
COMMANDING

ESTIMATED CONSTRUCTION START: APRIL 1989 INDEX: 1623
ESTIMATED MIDPOINT OF CONSTRUCTION: OCTOBER 1989 INDEX: 1650
ESTIMATED CONSTRUCTION COMPLETION: APRIL 1990 INDEX: 1666

RECEIVED BY STANK

1. COMPONENT			2. DATE
ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT	DATA	JAN 1987
3. INSTALLATION	NAND LOCATION nunition Plant		
4. PROJECT TITL	E	5.	PROJECT NUMBER TEMP
HAZ. MAT. STG	. BLDGAREA S		5317-18
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		
	ADDITIONAL PERSONNEL NECESSARY TO CARRY		(\$000)
OUT THE FU	NCTION OF THE PROPOSED FACILITY		(PEOPLE)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN NG FACILITY IF NEW FACILITY IS A		(\$000)
REPLACEMEN'	Γ		(\$000)
E. PLANNING A	ND DESIGN DATA (ESTIMATE)		
1. STATUS			
	DATE DESIGN STARTED		DEC 86 100
	PERCENT COMPLETE AS OF JANUARY 15 1988 PERCENT COMPLETE AS OF OCTOBER 1 1988		100
	DATE DESIGN COMPLETED		DFC 87
2. BASIS			
	DARD OR DEFINITIVE DESIGN YES E DESIGN WAS MOST RECENTLY USED:	NO	
3. COST (TO	DTAL - \$000)		
a. PRODU	JCTION OF PLANS AND SPECS		
	OTHER DESIGN COSTS		
	L COST (c) = (a)+(b) OR (d)+(e)		
	RACT		
4. CONSTRUC	CTION START DATE (PLANNED)		APR 89
ł I			

1. COMPONENT	FY 19	89 MILITARY	CONSTR	RUCTIO	N PF	ROJECT	DAT	2. DAT		1027
ARMY				T. 222.5			·	_1	JAN	1987
3. INSTALLATION A				4. PROJE	CT TI	TLE				
Milan Army	Ammunı	tion Plant		RE	PI.A	CE INFL	ATARI	E SHEI	TER	
Tennessee  5. PROGRAM ELEME	NT I	B. CATEGORY CODE	7. PROJ	ECT NUM				COST (SO		
				TEM						
		441 10		531	7-20				27	<u>'</u> 0
		9	COST EST	IMATES		,.		ran e		COST
		ITEM		1	U/M	QUANT	TY	COST		(\$000)
PRIMARY FAC	CILITY						$\neg$			239
		BLE SHELTER			LS	-	-		(	239)
SUPPORT FAC	CILITIE	S	<u></u>			····				
TOTAL CONT SUPERVISIO TOTAL REQU TOTAL REQU	RACT CO N, INSE EST EST (RO	PECT & OVHD ( 5.	50%)						(	239 12 251 14 265 270 0)
10. Description of Pro	posed Cons	truction	-	1	<del>.                                    </del>			<del> </del>	<u> </u>	
CANVAS, BL REPLACED W FLOODPLAIN  11. REQUIR PROJECT:	OWERS, ITH A N	REMOVING AN EXIBLOWER MOTORS AF THE STORAGE	ND ALL ED META ADEQUAT	RELATEI L BUILI E:	D HA	O SF	STR SITED	UCTURE IN A STD:	WIL	O SF
CONTAINERS  REQUIREMEN EXISTING A THE EXPECT	T : IR STRI	UCTURE WAS ERECT E OF THE FABRIC	ED IN 1 COVER W	977 AN	D WI	LL BE	ll YE PENDE	ARS OL D BY T	D IN HEN.	FY89.

1. COMPONENT		2. DATE
ARMY	FY 1989MILITARY CONSTRUCTION PROJECT DATA	
	N AND LOCATION	<u> </u>
Milan Army Am	munition Plant	
Tennessee		
4. PROJECT TITL	E	5. PROJECT NUMBER TEMP
REPLACE INFLA	TABLE SHELTER	5317-20

### CURRENT SITUATION:

CURRENTLY THE AIR SUPPORTED STRUCTURE SERVES AS AN ACCEPTABLE STORAGE AREA EVEN THOUGH ALL AVAILABLE FLOOR SPACE CANNOT BE UTILIZED SINCE THE FABRIC HAS DEVELOPED LEARS. IT IS EXPECTED THAT THE STRUCTURE WILL BE BEYOND REPAIR BY FY89.

# IMPACT IF NOT PROVIDED :

IF STRUCTURE IS NOT REPLACED PRIOR TO COMPLETE DETERIORATION OF FABRIC, 30,000 SQUARE FEET OF DRY STORAGE AREA WILL NO LONGER BE AVAILABLE.

JAN R. ROBERTS JAN R. ROBERTS LIC CMLC COMMANDING

ESTIMATED CONSTRUCTION STAFT:	APRIL	1080	INDEX: 1623
ESTIMATED MIDPOINT OF CONSTRUCTION:	OUTOBER	1080	1MDEX: 1650
ESTIMATED CONSTRUCTION DAMPLETS N:	AFRIL	100.	INDEX: 1666

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1. COMPONENT			2. DATE
	FY 1989MILITARY CONSTRUCTION PROJECT (	ATA	2. DATE
ARMY 3 INSTALLATIO	N AND LOCATION		<u> </u>
	munition Plant		
Tennessee			
4. PROJECT TITL	E	5.	PROJECT NUMBER
REPLACE INFLA	TABLE SHELTER	•	5317-20
		·	
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		(\$000)
	ADDITIONAL PERSONNEL NECESSARY TO CARRY INCTION OF THE PROPOSED FACILITY		(\$0007
C. ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
	ED FACILITY		(\$000)
· THE EXIST	LIFE-CYCLE COST TO OPERATE AND MAINTAIN ING FACILITY IF NEW FACILITY IS A		
REPLACEMEN	T7		(\$000)
E. PLANNING A	AND DESIGN DATA (ESTIMATE)		
1. STATUS			****** 157
	DATE DESIGN STARTED	•	DEC 56 100
	PERCENT COMPLETE AS OF JANUARY 15 1988  PERCENT COMPLETE AS OF OCTOBER 1 1988		100
	DATE DESIGN COMPLETED		DEC 87
2. BASIS			
	NDARD OR DEFINITIVE DESIGN YES RE DESIGN WAS MOST RECENTLY USED:	N()	
3. COST (1	TOTAL - \$000)		
a. PROI	DUCTION OF PLANS AND SPECS		
	OTHER DESIGN COSTS		
	AL COST (c) = (a)+(b) OR (d)+(e)		
	HOUSE		
4. CONSTRU	JCTION START DATE (PLANNED)		APR 89

1. COMPONENT	FY	19 89 MILITARY CO	NSTRUCTION	ON PR	OJECT DA	TA Z. DATE	
3.INSTALLATION A Radford Arr Virginia		ATION nunition Pt	1	EPLAC	TLE MO DEMENT DE FIVE (5)	bil Group	
5. PROGRAM ELEME	NT	6. CATEGORY CODE	7. PROJECT NUI	MBER MP	8. PROJE	CT COST (\$0	00)
		226 80	53	2616		1,3	00
		9. CC	ST ESTIMATES	U/M	QUANTITY	UNIT	COST
				0/		COST	(\$000)
PRIMARY FACE REPLACE				LS			1,176 ( 1,170
SUPPORT FAC	CILIT	IES					
TOTAL CONT SUPERVISION TOTAL REQUI	RACT C N. INS EST (E	SPECT A CVHD ( 5.50%	)				1,117 59 1,229 69 1,298 1,300
10. Description of Pro	posed Co	postruction		11		<b>!</b>	<u>                                     </u>
OPERATING I	BUILDI	VE AND RECONSTRUCT BUNGS. NOT SITED IN A	FLOOD PLA	IN.		CTIVE PR	
PROJECT: REPLACE TO EARTH FILLS BARRICADES AND DUCTWOS AND ROOFS ESCAPE CHUT DRAINAGE IS ELECTRICAL UPGRADE THE FACILITIES	WO MUED BANGED BANGE PASSIBLE AND ESTATE LIGHT BANGE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE AND ESTATE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PASSIBLE PAS	ULTI-STORY AND THREE RRICADES WITH ONE MU PROJECT MUST REMOVE SSING THROUGH OR ATTENDED THE BARRICADE POR NO SUPPORT FRAMING ASE DIVERTED AWAY FROM ING AND WIRING AND AP AT ONE TIME, IT WHEN MAJOR WORE IS P	SINGLE-ST ULTI-STORY AND RE-IN ACHED TO T TALS ARE T RE TO BE R OM THE BARR HEET THE LA NONCONFORM HAS PREVIO	CORY, ANL F STALL HE BA CO BE EPLAC ICADE TEST ING E	DOUBLE RECURSING UTILITIES REPLACED. CED AND THE CODES. NO LECTRICAL BEEN DECI	VETTED WELE-STORY S, PROCE ALSO, T DETERIO E SURFAC ON. UPGR TE: RATH AT ALL DED TO C	COODEN, CSS PIPING CHE FLOOR: CRATED CE CADE THE LER THAN THE CORRECT

1. COMPONENT		2. DATE
ARMY	FY 19 <u>89 MILITARY CONSTRUCTION PROJECT. DATA</u>	
3. INSTALLATIO	N AND LOCATION	
Radford Army	Ammunition Pt	
Virginia	<u> </u>	
4. PROJECT TI样	Eilization Group 1	5. PROJECT NUMBER
REPLACEMENT		TEMP
REPLACE FIVE	(5) BARRICADES	532616

(CONT)..

WIRING AND CONDUIT ON BARRICADES CORRECTS THE MAJORITY OF THE REQUIREMENTS.

## REQUIREMENT :

THIS PROJECT IS THE NINTH PHASE OF AN ANNUAL REPLACEMENT PROGRAM FOR THE BARRICADES AT THIS PLANT WHICH WERE ERECTED IN THE 1940-41 PERIOD. THIRTY-THREE BARRICADES IN PHASE 1 (FY-80) THROUGH PHASE V (FY-84) HAVE BEEN COMPLETED. REPAIRS TO MANY OF THESE BARRICADES HAVE BECOME EXCESSIVE AND CANNOT KEEP UP WITH THE RATE OF DETERIORATION, AND THE STRUCTURAL INTEGRITY CANNOT BE ASSURED.

# CURRENT SITUATION:

240 BARRICADES ARE REQUIRED AT THIS PLANT TO MEET CURRENT PRODUCTION SCHEDULES AND FOR MOBILIZATION. A PORTION OF THESE CAN BE MAINTAINED FOR THE NEXT 20 YEARS. THE REMAINING ONES SHOULD BE REPLACED BECAUSE OF DECAYING OF THE MAJOR STRUCTURAL COMPONENTS. A REPLACEMENT PROGRAM HAS BEEN STARTED TO RENEW THE BARRICADES AT THESE BUILDINGS, A FEW EACH YEAR, BEGINNING WITH THE ONES THAT ARE IN GREATEST NEED OF REPLACEMENT.

### IMPACT IF NOT PROVIDED:

WITHOUT ADEQUATE BARRICADES, RAAP COULD NOT CONTINUE TO OPERATE WITHIN EXISTING INTRALINE QUANTITY DISTANCES.

ADDITIONAL: NOT REQUIRED.

G. J. Savitske LTC, CMLC COMMANDER

ESTIMATED CONSTRUCTION START: MAY 1989 INDEX: 1608 ESTIMATED MIDPOINT OF CONSTRUCTION: JANUARY 1990 INDEX: 1655 ESTIMATED CONSTRUCTION COMPLETION: SEPTEMBER 1990 INDEX: 1694

1.	COMPONENT		<u> </u>	2. DATE
	ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT D	DATA	
3.	INSTALLATIO	N AND LOCATION		<del></del>
		Ammunition Pt		
	rginia		<del></del>	
	PROJECT TIES	Eilization Group l	5.	PROJECT NUMBER
		(5) BARRICADES		TEMP 532616
		SUPPLEMENTAL DATA		7,520,10
		SUPPLEMENTAL DATA		
۸.	ESTIMATED .	ANNUAL COST TO OPERATE PROPOSED FACILITY		0 (\$000)
В.		ADDITIONAL PERSONNEL NECESSARY TO CARRY		
	OUT THE FU	NCTION OF THE PROPOSED FACILITY		0
c.	ESTIMATED	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
		D FACILITY		0
]				(\$000)
Э.	THE EXISTI	LIFE-CYCLE COST TO OPERATE AND MAINTAIN NG FACILITY IF NEW FACILITY IS A		
	REPLACEMEN	T		0 (\$000)
Ε.	PLANNING A	ND DESIGN DATA (ESTIMATE)		
	: STATUS	•		
		DATE DESIGN STARTED		
1		PERCENT COMPLETE AS OF JANUARY 15 1985		100
		PERCENT COMPLETE AS OF OCTOBER 1 1983		100
	G .	TATE DESIGN COMPLETED		XOV: 87
	C. BASIS			
		DARD OR DEFINITIVE DESIGN YES E DESIGN WAS MOST RECENTLY USED:	NO	
	a. PRODI b. ALL ( c. TOTA) d. CONTI e. IN HO	OTAL - \$000)  UCTION OF PLANS AND SPECS  OTHER DESIGN COSTS		
	4. CONSTRUC	CTION START DATE (PLANNED)		Apr 89

1. COMPONENT	<b>FY 19</b> 89	MILITARY	CONST	RUCTIO	ON PF	ROJECT DA	2. DATE	1 1951
3. INSTALLATION AN RADFOFD ARM Virginia		Tq NC		1	FETY	Mod	il Group Ternizat	· · · · · ·
5. PROGRAM ELEME	NT 6. CAT	EGORY CODE	7. PRO.	ECT NUM			T COST (SO	
		812_40	_	8 92	519		1	4,200
		9.	COST EST	MATES				
	1	TEM			U/M	QUANTITY	COST	( <b>\$000)</b> GOAL
PRIMARY FAC UPGRADE E					LS			12,808 12,808)
•								
SUPPORT FAC	ILITIES							
SUBTOTAL CONTINGENCY TOTAL CONTR SUPERVISION TOTAL REQUE TOTAL REQUE INSTALLED E	AVI COUT , INSPECT G ST (ROUNDER	OVHD ( 5.5	()%)					12,808 640 13,445 740 14,188 14,200

### 10. Description of Proposed Construction

The basic system improvements are required to ensure reliable electrical power and to provide safe operation of the electrical distribution system feeding from the powerhouse. By the present day standards and codes the distribution system is considerably inadequate in both physical and electrical characteristics. Circuits going out of the powerhouse are too close together. When an electrical fault occurs on one circuit, it sometimes propagates to other circuits by electrical arcing which causes unnecessary production curtailments and hazards to plant personnel in congested areas (main road from Gate No. 1 and combined shops). NOTE: This is Phase II portion of the original Project 5872225 (Overhaul of Electrical Distribution Systems). Phase I of the project was submitted under Project 5872225. These conditions have led to an assigned Risk Assessment Code of 3. In order to alleviate this hazard and provide adequate capacity for modernization the entire distribution system must be altered to remove many of these circuits from the powerhouse. To accomplish this task, major modi-fications to the distribution are listed below:

1. COMPONENT	COMPONENT   FY 1989 MILITARY CONSTRUCTION PROJECT DATA	
ARMY	The	
	N AND LOCATION AMMUNITION PT	
Virginia		
4. PROJECT TITE	bilization Group 1	5. PROJECT NUMBER
SAFETY	Modernization	
UPGRADE PRIMA	RY OVERHEAD ELECTRICAL DISTRI	892519

### DESCRIPTION OF PROPOSED CONSTRUCTION

(CONT)..

- (1) Reduction of the number of 2.4KV circuits feeding out of the powerhouse (to reduce wiring congestion), limiting the number of 2.4KV circuits to area near the powerhouse where there are many 2.3KV motors.
- (2) The remaining plant area to be converted to a 12.47 KV system by expanding the existing 12.47 system with loop concept and sectionalizing switches.
- (3) Expand the 69KV substation capacity at 1st Rolled Powder and TNT for future projected loads in modernization and mobilization plans.
- (4) Upgrade the existing 12.47KV primary distribution system in the main plant area to meet the present safety manual requirements.
- (5) Provide high resistance grounding for the existing and proposed 480 volt substations that will continue to be fed by the 2.4KV and 12.47KV primary system in main plant area.

# 11. REQUIREMENT: kv ADEQUATE: kv SUBSTD: (PROJECT:

To ensure continued production by correcting hazardous deficiencies of the congested distribution system at RAAP that is being served at 2.4KV from Powerhouse No. 1 through modernization of the 45-year old existing facilities. The benefits realized will reduce the congested 2.4KV circuits (from seventeen to seven) from the powerhouse, thus minimizing fault propagation from one circuit to adjacent circuits and to reduce mobilization and modernization loads on the powerhouse. Additionally, the RAC of 3 conditions on the main plant area would be eliminated.

# REQUIREMENT :

This project has been assigned RISK ASSESSMENT CODE OF 3 which was based on the congested wiring and inadequate power requirements at the powerhouse to supply mobilization and modernization loads. Therefore, the existing conditions cannot improve unless immediate actions are taken. The original P-15 for this project was submitted in February 1980.

# CURRENT SITUATION:

The preventive maintenance program has been greatly accelerated, major maintenance projects, such as: pole replacement, power lines replacement and modifications are being made. Extra precautions are taken for power outages, shut downs and for safety of personnel which curtails production.

1. COMPONENT		2. DATE					
ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	Jal. 1937					
RADFORD ARMY	3. INSTALLATION AND LOCATION RADFORD ARMY AMMUNITION PT						
Virginia							
4. PROJECT TIME	tilization Group l	5. PROJECT NUMBER					
SAFETY	Modernization						
UPGRADE PRIMA	RY OVERHEAD ELECTRICAL DISTRI	892519					

## IMPACT IF NOT PROVIDED:

The electrical distribution system will continue to operate with known hazards to personnel and equipment. We will continue to have unnecessary power outages which curtails production at RAAP.

## ADDITIONAL :

An economic analysis will not be performed; as safety and modernization, not production or project payback, is the reason for this project. However, the production capability is dependent upon successful execution of this project.

G. J. SAVITSKE LTC, ORDC COMMANDER - RAAP

ESTIMATED CONSTRUCTION START:	AFRIL	1989	INDEX: 1623
ESTIMATED MIDPHINT OF CONSTRUCTION:	AUGUST	1990	INDEX: 1682
ESTIMATED CONSTRUCTION COMPLETION:	JANUARY	1992	INDEX: 1739

1. COMPONENT		<del></del>	2. DATE
	FY 1989 MILITARY CONSTRUCTION PROJECT I	DATA	3 1 67
ARMY	N AND LOCATION		
RADFORD ARMY			
Virginia			
	bilization Group l	5.	PROJECT NUMBER
	Modernization RY OVERHEAD ELECTRICAL DISTRI		89251 <b>9</b>
OFGRADE PRIMA	RI OVERNEND ELECTRICAL DISTRI		672319
	SUPPLEMENTAL DATA		
A. ESTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		222,120 (\$000)
B. NUMBER OF	ADDITIONAL PERSONNEL NECESSARY TO CARRY		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
OUT THE FU	NOTION OF THE PROPOSED FACILITY		0
C ECTIMATES	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		(PEOPLE)
	D FACILITY		2,115,475
			(\$000)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		
· ·	NO FACILITY IF NEW FACILITY IS A		3,530,355
KLI LAGLERIE			(\$000)
:			
E. PLANNING A	NU DESIGN DATA (ESTIMATE)		
l. STATUS			
	DATE DESIGN STARTED		007 86
<b>.</b>	PERCENT COMPLETE AS OF JANUARY 15 1988		1()()
	PERCENT COMPLETE AS OF OCTOBER 1 1988		100 Hov 87
-1 •	DATE DESIGN COMPLETED		.,(')
2. BASIS			
a. STAN	DARD OR DEFINITIVE DESIGN YES	No	
b. WHER	E DESIGN WAS MOST RECENTLY USED:		
3. COST (T	OTAL - \$000)		
	UCTION OF PLANS AND SPECS		
	OTHER DESIGN COSTS		
	L COST (c) = $(a)+(b)$ OR $(d)+(e)$		
	OUSE		
			, nn - 07:
4. CONSTRU	CTION START DATE (PLANNED)		APR 89

1. COMPONENT	FY 1989 MILITARY	Y CONSTRUCTION PE	ROJECT DA	2. DATE	
ARMY	TI 15°			10,27	
NSTALLATION AN		4. PROJECT TI		ilGroup	ī
•	Ammunition Pt	REPLACE			
Virginia		REPLAC	E BRIDGE N	10. 930	
ROGRAM ELEMEN	T 6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJEC	CT COST (\$00	0)
		TEMP	Į.		
	851 12	9532615			370
		9. COST ESTIMATES			
	ITEM	U/M	QUANTITY	COST	(\$000)
PRIMARY FACI	LITY			-	
REPLACE BR		LS		[ ]	33 <b>7</b> 337
NETLACE DR	TDGC	LS			337
				]	
SUPPORT FACI	LITIES	<del></del>			
	= · · · ·	† †			
				i i	
		[ ]	!		
		<u></u>			
SUBTOTAL	•				337
CONTINGENCY	PERCENT ( 5.00%)			1	1 7
TOTAL CONTRA				j j	354
	INSPECT & OVHD ( 5.)	50%)		ļ i	1 9
TOTAL REQUES					373
TOTAL REQUES					370
INSTALLED EQ	UIPMENT-OTHER APPROP			1	C
Description of Propo	sed Construction				
	E AND REMOVE EXISTING				
	H MAXIMUM WEIGHT OF				
	RRY AASHTO HS20 LIVE				
	HE UNDERSTRUCTURE OF	22 FEET, MINIMUM	ROADWAY OF	24 FEET	AND A
FOOT WALKWAY	ON ONE SIDE.				
11 proutes	CNT. (5 to	A DE OUA TE .	0 15 015	CTI	(5.15
11. REQUIREM	ENT: 65 LF	ADEQUATE:	O LF SUB	STD:	65 LF
PROJECT :	OF THE PUICTING BOUN	CDARER HOOD PRINCE	TITTE A OF	MCDCTC 4	ND CTEE
	OF THE EXISTING DOWN		WITH A CC	MCKEIE A	NU SIEEL
STRUCTURE TO	CARRY AASHTO HS20 L	IVE LUADING.			
DINCOTOND 10					

AND PREVENT CLOSING THE ROAD CAUSING ALL VEHICLES TO TRAVEL LONGER ROUTES.

1. COMPONENT		2. DATE
ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	
3. INSTALLATION Rad ford Army	· · · · · · · · · · · · · · · ·	
Virginia		
4. PROJECT TIPLE ilization Group 1 5		5. PROJECT NUMBER
REPLACEMENT		TEMP
REPLACE BRIDG	E NO. 930	9532615

# CURRENT SITUATION:

THE EXISTING DOWNGRADED BRIDGE IS RESTRICTED TO LIGHT TRAFFIC AND HEAVY TRAFFIC HAS TO TRAVEL LONGER ROUTES.

# IMPACT IF NOT PROVIDED:

IF THIS BRIDGE IS NOT REPLACED AND THE SETTLEMENT CONTINUES, THE ROAD WILL BE CLOSED CAUSING ALL VEHICLES TO TRAVEL LONGER ROUTES AND WILL HAVE AN IMPACT ON PRODUCTION EFFICIENCY.

### ADDITIONAL :

ECONOMIC JUSTIFICATION IS IN THE P-15.

G. J. SAVITSKE LTC, ORDC COMMANDER-RAAP

ESTIMATED CONSTRUCTION START:	JANUARY	1989	INDEX: 1616
ESTIMATED MIDPOINT OF CONSTRUCTION:	MAY	1989	INDEX: 1627
ESTIMATED CONTROLLOW COMPLETION:	OCTOBER	1989	INDEX: 1650

1. COMPONENT			2. DATE
ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT	DATA	111
	N AND LOCATION	·	
Virginia	Ammunition Pt		
	Eilization Group 1 E No. 930	5.	PROJECT NUMBER TEMP 9532615
	SUPPLEMENTAL DATA		
A FSTIMATED	ANNUAL COST TO OPERATE PROPOSED FACILITY		5
A. ESTINATED	AMACAL COST TO OFERATE PROPOSED FACILITY		(\$000)
	APPLITIONAL PERSONNEL NECESSARY TO CARRY SUCTION OF THE PROPOSED FACILITY		O (PEOPLE)
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN		403
	LIFE-CYCLE COST TO OPERATE AND MAINTAIN NO FACILITY IF NEW FACILITY IS A		(\$000)
REPLACEMET	· · · · · · · · · · · · · · · · · · ·		(\$000)
E. PLANNIN : /	NU PENION DATA (ESTIMATE)		
۶. د.	PERCENT COMPLETE AS OF JANUARY 15 1988 PERCENT COMPLETE AS OF OCTOBER 1 1988 DATE DESIGN COMPLETED		001 50 100 100 NOV 87
	DATE REPORTING DESIGN YES	N ·	
a. PROI b. ALL c. TOTA d. CONT	OUCTION OF PLANS AND SPECS OTHER DESIGN COSTS AL COST 'c) = (a)+(b) OR (d)+(e) TRACT		
4. CONSTRU	UCTION START DATE (PLANNED)		JAN 89

1. COMPONENT	FY 19 89	MILITARY O	CONSTR	RUCTION	l PR	OJECT DAT	Z. DATE	<b>6-</b>
. INSTALLATION AI Twin Cities Minnesota		Pt		4. PROJEC Add Pac	iti		<u> </u>	·
PROGRAM ELEME	NT 6 CATE	GORY CODE	7. PROJ	ECT NUMBI TEMP	ER	8 PROJEC	T COST (800	
		821 90	┸	5201	-22			560
			COST EST		<del>-</del> -		UNIT	COST
	1	TEM		U	/ <b>M</b>	QUANTITY	COST	(\$000)
	tackage Boll d Improveme				LS LS			503 ( 120) ( 383)
SUBTOTAL CONTINGENCY TOTAL CONTE SUPERVISION TOTAL REQUE TOTAL REQUE INSTALLED E	WACT FEST WEST ROUNDED COLPMENT-60	COME 5.50	r"					503 25 528 29 557 560 01

Install two self-contained package boilers -- an 150 HP boiler in building 103, and a 200 HF boiler in a new building to be constructed adjacent to Building 502. Make necessary modifications to existing structures and equipment, to accomodate the new facilities...

11.	REQUIREMENT:	350	HP	ADEQUATE:	()	HP	SUBSTD:	350 HP
PRO	IFCT ·							

Provide steam during non-heating season to meet process steam package boilers in or near subject buildings, rather than central steam plant.

ROSENS SER MERCE CONTROL DE SONO DE LA CONTROL DE SONO DE LA CONTROL DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO DE SONO D

1. COMPONENT		2. DATE
ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	387
	N AND LOCATION	
Twin Cities A	rmy Ammo Pt	
dinnesota		5 000 1507 NUMBER
<mark>4. PROJECT TITL</mark> Addition	E	5. PROJECT NUMBER
Package Boile	rs	5201-22
REQUIREMENT :		
Sund Bings (117 Summer muint)	it is needed now to permit complete shutdown of and 515 during the non-heating season, thereb names of central plants and outside steam line orical provision of service to Buildings 103 a	y permitting s and allowing
CURRENT SILV	MON:	
porter socialistic Le curso centralistic Custant per persone	sent time, the central steam plant is kept on each, to provide process steam to Bulldings 1 al, because the main beliefs are operated at tance correst, and because of the use of long tribuillings being served.	03 and 502. This he low end et
IMPA-1-19-16-1	in virai :	
intline . to	of is not provided, the current operation was ultime in a ntimue superconomical operation and lot at with the Army's long-range energy cons	waste of en
W 111 but t		
The ending	in analysis summary provided in the March Lee. J18 of Cent.	19-1, P=15

1. COMPONENT	F			2. DATE
	FY 1989 MILITARY CON	ISTRUCTION PROJE	CT DATA	11 5 707
ARMY				
3. INSTALLATIO Twin Cities A	N AND LOCATION			
Minnesota				
4. PROJECT TITL	E			5. PROJECT NUMBER
Addition				TEMP
Package Boile	rs			5201-22
Design con	cept is nearing comple	tion by archetect	t-enginee	er retained by
Corps of Engi		·	J	·
	e 🛫	Theadore Schulte		
	•	Theodore Schulte		•
		Commanders Repres	sentative	<u>.</u>
		08-12		
		•		
	CIRCOIDE SIARI:	APRIL		INDEX: 1623
	FRINI OF CONSTRUCTIONS STRUCTION COMPLETIONS			INDEX: 1650
Etiannita e a	Carry Carry Control (Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Carry Car	WIN.	1990	INDEX: 1666
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1				
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B. NUMBER OF ADDITIONAL PERSONNEL NECESSARY TO CARRY OUT THE FUNCTION OF THE PROPOSED FACILITY	1,757
Twin Cities Army Ammo Pt Minnesota  APROJECTITUE Addition Package Boilers  SUPPLEMENTAL DATA  A. ESTIMATED ANNUAL COST TO OPERATE PROPOSED FACILITY  B. NUMBER OF ADDITIONAL PERSONNEL NECESSARY TO CARRY OUT THE FUNCTION OF THE PROPOSED FACILITY.  C. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE DESIRED FACILITY.  C. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE EXISTING FACILITY IF NEW FACILITY IS A REPLACEMENT.  C. PLANNING AND DESIGN DATA (ESTIMATE)  1. STATUS  2. DATE DESIGN STARTED. 2. PERCENT COMPLETE AS OF JARNARY 15 1988. 2. PERCENT COMPLETE AS OF OCTOBER 1 1988. 3. DATE DESIGN COMPLETED.  2. BASIS 2. STARDING I DEFINITIVE DESIGN YES X B B. WHERE DESIGN WAS MOST RECENTLY USED: NA  3. COST (TOTAL = SOGG) 3. PRODUCTION OF PLANS AND SPECS 5. ALL OTHER DESIGN COSTS. 1. TOTAL COST (10 = 40.4+16) OR (3.4+16).  d. CONTRACT.	
### Addition ### September ### Supplemental Data  ### Addition ### Supplemental Data  ### A. ESTIMATED ANNUAL COST TO OPERATE PROPOSED FACILITY ### Supplemental Data  #### A. ESTIMATED ANNUAL COST TO OPERATE PROPOSED FACILITY ### Supplemental Data  #### B. NUMBER OF ADDITIONAL PERSONNEL NECESSARY TO CARRY OUT THE FUNCTION OF THE PROPOSED FACILITY. ### (P)  #### C. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE DESIRED FACILITY IF NEW FACILITY IS A REPLACEMENT. ### RECENTION OF PACIFITY IF NEW FACILITY IS A REPLACEMENT. ### RECENTION OF PACIFIC AS OF OCTOBER 1 1988. ### DEC 1. PERCENT COMPLETE AS OF OCTOBER 1 1988. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DESIGN COMPLETED. ### DATE DATE DATE DATE DATE DATE DATE DATE	
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SUPPLEMENTAL DATA  A. ESTIMATED ANNUAL COST TO OPERATE PROPOSED FACILITY  B. NUMBER OF ADDITIONAL PERSONNEL NECESSARY TO CARRY OUT THE FUNCTION OF THE PROPOSED FACILITY  C. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE DESIRED FACILITY.  D. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE EXISTING FACILITY IF NEW FACILITY IS A REPLACEMENT.  C. STATUS  1. STATUS  1. DATE DESIGN DATA (ESTIMATE)  1. STATUS  2. DATE DESIGN STARTED  3. DATE DESIGN COMPLETE AS OF JARCARY 15 1988  4. DATE DESIGN COMPLETED  3. DATE DESIGN COMPLETED  3. DATE DESIGN COMPLETED  3. STANDARD B DESIGN COMPLETED  3. STANDARD B DESIGN WAS MOST RECENTLY USED:  NA  3. COST (TOTAL - SOOO)  4. PRODUCTION OF PLANS AND SPECS  5. ALL OTHER DESIGN COSTS.  1. TOTAL COST (or = (4)+16) OR (3)+160  d. CONTRACT	
A. ESTIMATED ANNUAL COST TO OPERATE PROPOSED FACILITY  B. NUMBER OF ADDITIONAL PERSONNEL NECESSARY TO CARRY OUT THE FUNCTION OF THE PROPOSED FACILITY.  C. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE DESIRED FACILITY.  C. D. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE EXISTING FACILITY IF NEW FACILITY IS A REPLACEMENT.  C. STATUS  1. STATUS  2. DATE DESIGN STARTED. 2. PERCENT COMPLETE AS OF JANUARY 15 1988. 3. DATE DESIGN STARTED. 4. STANDARD COMPLETE AS OF OCTOBER 1 1988. 3. DATE DESIGN COMPLETED. 4. STANDARD 1 DEFINITIVE DESIGN YES X N D. WHERE DESIGN WAS MOST RECENTLY USED: NA  3. COST (TOTAL = \$000) 4. PRODUCTION OF PLANS AND SPECS 5. ALL OTHER DESIGN COSTS. 1. TOTAL COST () = {44}+16) OR (44+16).  d. CONTRACT.	-22
A. ESTIMATED ANNUAL COST TO OPERATE PROPOSED FACILITY  B. NUMBER OF ADDITIONAL PERSONNEL NECESSARY TO CARRY OUT THE FUNCTION OF THE PROPOSED FACILITY.  C. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE DESIRED FACILITY.  C. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE EXISTING FACILITY IF NEW FACILITY IS A REPLACEMENT.  C. STATUS  E. PLANNING AND DESIGN DATA (ESTIMATE)  1. STATUS  2. DATE DESIGN STARTED. 2. DERGENT COMPLETE AS OF JANUARY 15 1988. 3. DATE DESIGN COMPLETE AS OF OCTOBER 1 1988. 3. DATE DESIGN COMPLETED.  2. BASIS 3. STANDARD 1 DEFINITIVE DESIGN YES X N D. WHERE DESIGN WAS MOST RECENTLY USED:  NA  3. COST (TOTAL = 8000) 3. PRODUCTION OF PLANS AND SPECS 5. ALL OTHER DESIGN COSTS. 1. TOTAL COST (*) = (a) + (b) OR (*d) + (m)  d. CONTRACT.	
B. NUMBER OF ADDITIONAL PERSONNEL NECESSARY TO CARRY OUT THE FUNCTION OF THE PROPOSED FACILITY	
B. NUMBER OF ADDITIONAL PERSONNEL NECESSARY TO CARRY OUT THE FUNCTION OF THE PROPOSED FACILITY	94 \$000)
C. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE DESIRED FACILITY  D. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE EXISTING FACILITY IF NEW FACILITY IS A REPLACEMENT.  C. STATUS  1. STATUS  2. DATE DESIGN STARTED 2. PERCENT COMPLETE AS OF JANUARY 15 1988 2. PERCENT COMPLETE AS OF OCTOBER 1 1988 3. DATE DESIGN COMPLETED  JAN  2. BASIS 4. STANDARI & DEFINITIVE DESIGN YES X N 5. WHERE DESIGN WAS MOST RECENTLY USED: NA  3. COST (TOTAL - SOOO) 4. PRODUCTION OF PLANS AND SPECS 5. ALL OTHER DESIGN COSTS 1. TOTAL COST (c) = (q)+(b) OR (d)+(m) d. CONTRACT	0
D. ESTIMATED LIFE-CYCLE COST TO OPERATE AND MAINTAIN THE EXISTING FACILITY IF NEW FACILITY IS A REPLACEMENT.  (SEE PLANNING AND DESIGN DATA (ESTIMATE)  1. STATUS  3. DATE DESIGN STARTED. 4. PERCENT COMPLETE AS OF JANUARY 15 1988. 5. DATE DESIGN COMPLETED.  2. BASIA 4. STANDALL I DEFINITIVE DESIGN YES X X 5. WHERE DESIGN WAS MOST RECENTLY USED: NA  3. COST (TOTAL - \$000) 4. PRODUCTION OF PLANS AND SPECS 5. ALL OTHER DESIGN COSTS. 1. TOTAL COST (C) = (4)+(5) OR (4)+(4) d. CONTRACT.	EOPLE)
E. PLANNING AND DESIGN DATA (ESTIMATE)  1. STATES  2. DATE DESIGN STARTED	\$000)
1. STATUS  2. DATE DESIGN STARTED	\$000)
DEC  1. PERCENT COMPLETE AS OF JANUARY 15 1988.  2. PERCENT COMPLETE AS OF OCTOBER 1 1988.  3. DATE DESIGN COMPLETED.  JAN  2. BASIS  4. STANDALL B DEFINITIVE DESIGN YES X X  b. WHERE DESIGN WAS MOST RECENTLY USED:  NA  3. COST (TOTAL = \$000)  4. PRODUCTION OF PLANS AND SPECS  5. ALL OTHER DESIGN COSTS.  1. TOTAL COST   c   = (a) + (b) OR   d + (m)  d. CONTRACT.	
4. STANDALL DEFINITIVE DESIGN YES X N b. WHERE DESIGN WAS MOST RECENTLY USED: NA  3. COST (TOTAL - \$000) a. PRODUCTION OF PLANS AND SPECS b. ALL OTHER DESIGN COSTS	100 100
a. PRODUCTION OF PLANS AND SPECS	
	NA 29 29 NA 29
4. CONSTRUCTION START DATE (PLANNED) APR	89

1. COMPONENT ARMY	FY 19 89	MILITARY	CONSTR	IUCTION PRO		2. DATE
3.INSTALLATION AN Lake City A Missouri		ant		4. <b>PROJECT TITLI</b> Additio Pyroteci		Group 1 ration y Enhance
5. PROGRAM ELEMEN	NT 6. CATE	GORY CODE	7. PROJI	TEMP	8 PROJECT C	
<del></del>	1		COST EST	T892245	<del></del>	830

ITEM	U/ <b>M</b>	QUANTITY	COST		COST \$000)
PRIMARY FACILITY				<del>                                     </del>	645
Auxiliary Mixing Robers	LS			(	529
Explosive Hamar Louis Waste System	LS			(	80
Control Rooms	LS			(	36
SUDDA OF PARTY AND AND AND AND AND AND AND AND AND AND					
SUPPORT FACILITIES		ļ			105
Electric Service	LS	****		(	5.8
Water, Sewing Cas	LS			(	10
Steam, Chille Water Copyate best Paving, W. Sanderberg, September	LS	7 <del>-</del>		[	
Storm In Chile	LS				8
Site District to the Degree	LS	-		,	1
Communication	LS LS			[,	
Demonstration of the strong decomposition	13			(	) c
SUBTOTAL					750
CONTINGEN Y REELENT					38
IMIAL CONING CONT	1 1				788
SUPERVISE N. INCPUID . THE CONTROL					4
FOTAL RETURNS	1 1				831
PAWE AT MELLER BOTTON					350
INSTALLED E COMENO DE CARACTE					4.763

### 10. Description of Proposed Construction

This project is the enhance personnel safety in the pyrotechnic manufacturing area at Labelity AAP. Included will be new mixers, remote material handling systems, fact response fire suppression systems and improved new bays. The pyrotectual manufacturing areas where tracer, igniter, and incendiary out it as seen as it, in.e., and granulated for small caliber ammunition. Each of these litems will be applied to Buillings 33A, b, and C.

Il. REQUIREMENT:	1.290	SF	ADE-(UATE:	336	SF	SUBSTD:	0 :	SF
PROJECT :								

This project involves the installation of new generation equipment and facilities to improve safety in the pyrotechnics manufacturing areas at LCAAP.

Plannel safety enhancement of pyrotechnic manufacturing areas at LCAAP

1. COMPONENT	TION PROJECT DATA	
ARMY	11 13 <u>02</u> WIETTANT 001011100	10011100201 27177
3. INSTALLATION	AND LOCATION	
Lake City A	rmy Ammo Plant	
Missouri		
4. PROJECT TITLE	Mobilization Group !	5. PROJECT NUMBER
Addition	Alteration	TEMP
Pyrotechnic	Safety Enhance	T892245

(CONT)..

will include the addition of new mixers, remote material handling systems, fast response fire suppression systems, and improved bay design.

ROOTIREMENT .

This project will enable the operator to remotely perform measuring, weighing, drying, granulating, and blending; tremendously reducing the operator's risk exposure. Mixers will provide improved safety through reduction of employee exposure to hazard materials. The problem with existing overhead sprinkler system is temperature sensitive. The response time is slow and independent acting for each sensing sprinkler head. Fires can spread taster than individual temperature sensitive heads can react.

No other facilities at Lab. City AAP are capable of manufacturing pyrotechnic materials.

## CURRENT SITUATI N :

The present facilities and equipment have operated since 1942 to produce pyrotechnic compositions for small caliber ammunition production. The present operation relies on the apprator to manually perform all tasks to produce pyrotechnic mixtures. The manual operations performed by the operator are reasonable without, which is secured to another hand blending.

# IMPACT IF NOT PROVIDED :

Employee exposure to hazardous materials will continue. The absence of an adequate fire suppression system to protect personnel and facilities could lead to catastrophic incident in the area. Equipment currently relied upon such as dryers, mixer, granulators, pulverizers, and blenders are experiencing increased downtine and maintenance.

## ADDITIONAL :

This project involves the installation of new generation equipment and facilities to improve safety in the pyrotechnics manufacturing area at LCAAP.

1. COMPONENT	FY 1989 MILITARY CONSTR	LICTION PRO IS	CTDATA	2 DATE
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1. COMPONENT			2 DATE
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3. INSTALLATION A	imy Ammo Plant		
Missouri			
4. PROJECT TITLE	Obilization Group 1	5 PROJECT	
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ryrocecnnic	Safety Enhance		154
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B. NUMBER H	- 		
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4. CONSTE	RUCTION START DATE (PLANNED)		

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Description of Proposed Construction				
Johnston to an annex to an existing pyrotechnic building (63%) to provide space for a control required to support new pyrotechnic processing to anstallation in the existing facility. From the rials will also be accomplished in the new displace area currently used to store these magnifications.	rao Mila Taze Tape	er and evend Operation MI Optopyther Experiences	anacaloro of AD optober the MIGRO	ono i O will
restroom will be provided for and located in the existing building will require modification wall between Bays 182, installation of conduct washdown and waste water collection, and upgratemperature and humidity control system will be corridors, and in the pyrotechnic raw material annex.	he non to rve ding	ew annex. the concr flooring, of steam quired for	ete divid provision utilities Bays 1 t	ing is for . A hru 7,

1. COMPONENT  ARMY	FY 1989 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
3. INSTALLATIO	N AND LOCATION y Amenition Pt	
4. PROJECT TITE Addition Production Co	Alteration	5. PROJECT NUMBER TEMP 5892245

This project will enable Line Star AAP to enhance personnel safety by providing the space to anti-ment new to imploy ally improved pyrotechnic processing mixing, crane atoms, from a MIGRAD equipment.

### REQUIREMENT :

In order to end an approximate two by providing new technological advanced pyrotechnic processing equipment MIGRAD), difficult space to house this equipment is required. This new equipment reduces operator exposure frequency to pyrotechnic material by 9...

Approximately thirteen of a givente lead mixtures are currently produced in Building GeBy. Folder the endays of third buildings are fully utilized, with some bays performed in the content of the content of granulating. Bays I thru 7 are used for the second structures are new more reals and finished pyrotechnic mixtures. The other tensions the critical field the monotony provided by the MIGRAD System, additional space is required. The existing equipment in G-33 must be retained for the monotony and the common be manufactured in the MIGRAD.

# CURRENT SITUATION :

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To produce a be pound for injunctive of a tyre of protechnic elections entered original current methods require that the analysis of elections of hards. The so pound has he after blending, is an intermediate operator for a common rement. Each of pound quantity is hard, if separately by the operator foring subsequent processing. The operator is exposed to the pyrocusture betimes for each of ten separate operations, by way of contrast, the new MIGRAB process requires that the operator is exposed to the pyrote initialization of times per batch. The MIGRAB blonds, granulated, and dry a by pound but it of pyrotechnic mixture in one cycle and its marges and separates the material into 5 lb. increments. The operator is exposed only when transporting the finished blb. increments.

## IMPACT IF NOT PROVIDED:

If this project is not approved, Lone Star AAP cannot fully implement the MIGRAD Systems needed for current pyrotechnic production requirements. The pyrotechnic operation in Building G-33 will continue as is, exposing operators to hazardous materials 10 times more frequently than what could be achieved with the new MIGRAD System.

1. COMPONENT		<del></del>	I DATE
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1. COMPONENT			2. DATE
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	N AND LOCATION		
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4. PROJECT TITL		5.	PROJECT NUMBER TEMP
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4. CONSTRU	CTION START DATE (PLANNED)		

1. COMPONENT  ARMY	FY 19 <sup>89</sup>	MILITARY	OJECT DATA	
3. INSTALLATION AF Longhorn Arr Texas		on Pt		ization afoty Enhancement
5. PROGRAM ELEME	NT CAT	EGORY CODE	7. PROJECT NUMBER TEMP 5892245	8 PROJECT COST (\$000) 820

9. COST ESTIMATES					
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### 10 Description of Proposed Construction

This provided in existing facilities. Alteration of existing facilities has been disallowed since new construction to raise the roof would not be ending facilities at Longhorn AAP to house these mixers. The MIGRAD mixers require more head room than is provided in existing facilities. Alteration of existing facilities has been disallowed since new construction to raise the roof would not be in compliance with AMC-R 385-100 dated 1 August 1985 requirements.

The operations area of the new mix facility will have two mixer bays, four raw material surge bays, two finished mix surge bays, passageways, an inert cart and blender bucket conditioning area and a loading dock. The operations area of the facility is approximately 3700 sq ft. Wall design of the mixer and surge bays is to be in accordance with TM 5-1300. Requirements

1. COMPONENT		2. DATE
ARMY	FY 19 <u>89</u> MILITARY CONSTRUCTION PROJECT DATA	36 367
3. INSTALLATIO	N AND LOCATION	<del></del>
Longhorn Arm	y Ammunition Pt	,
Texas	(	
4. PROJECT TITL	.E	5. PROJECT NUMBER
Modernization	n	TEMP
Pyro Safety	Enhancement	5892245

### DESCRIPTION OF PROPOSED CONSTRUCTION

(CONT)..

and arrangement of restroom facilities, equipment rooms, fire protection deluge valve room, etc is to be determined by the Design Agency. The facility is located within an existing pyrotechnic production facility. Come that to exist in utility systems and provision of access roads and equipment pais for installation of AMC equipment is in luded in this project.

Temperature and humidity conditioning is to be provided in the mixer and surge bays and heating and cooling are to be provided in other operational areas for context conditioning. Conditioning of mix and surge areas for a relative humidity of levels at 68 to 78 degrees Fire required to reduce processing laderis.

A waster celled than then bean isomplane to be immissed to collect was law, products and contain any potential spill. Restroom tabilities for male and tomals appearances will be needed. Connection to existing electrical, Steam, amplied itsir, telephone, potable water, three water and sewer lines will be required. These utilities are in near proximity to the proposed tability.

Equipment pate unital ress roads are medici per unit liation unit maintenance if Morpholes support equipment. Iwa pois with access roads are modified. The control of the Posit by 4 of the Deviction of Section in reference to the control of a legislatural to provide all wasters as the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contro

TI. REMIREMENTE 1 13.715 OF ADEQUATE: 15 STENTIS 1 17 SE PROJECT :

Safety needs to be improved by reducing personnel expirate to hizardous operations and materials. This can be accomplished by use of the new technology MIGRAD mixers to eliminate certain manual traving, drying, and granulation processes.

REQUIREMENT :

This project is needed to provide processing improvements which will enhance safety. Numerous flashes have occurred at this, and other, pyrotechnics producing plants. These flashes have resulted in injuries, fatalities, equipment and facility damage, lost production time and

1. COMPONENT			-	2. DATE
ARMY	FY 1989 MILITARY CONS	STRUCTION PROJEC	T DATA	
	NAND LOCATION Ammunition Pt		<del>.</del> .	•
Texas				
4. PROJECT TITE Moderning tion Pyro Safety Ea	_			5. PROJECT NUMBER TEMP 5892245
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### 10 Description of Proposed Construction

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Lightning Prote tion/Pipeline and Fonce Grounding: Provide these changes to essary to tring existing facilities and utilities into compliance with the manuality requirements of Chapter 8, AMC-R 385-100.

1. Lightning Protection Upgrade - Significant changes in lightning protection requirements have occurred sin econstruction of Longhorn operating buildings.

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hazardous materials. (2) providing safe egress from a pyrotechnic production PREVIOUS EDITIONS MAY BE USED INTERNALLY UNTIL EXHAUSTED

Safety needs to be improved by (1) reduction of personnel exposure to

1. COMPONENT	Z DATE	
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3. INSTALLATION . Longhorn A Texas	AND LOCATION  They Ammunition Pt	,
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PROJECT :

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taulity, it must aiming a lateve lumidity to avoid static electricity has a for an open vent apportaneous, guition resulting from moisture and matter was remotal powers are processed, and (4) providing improved limits are most also as the second matter.

RECOMPLEMENTS:

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Project is needed to emply with mandatory lightning protection and temperature conditive entitioning requirements per AMC-R 385-100 dated 1. Approximent for a conditioning requirement of the Chapter 13, Paragraph 176, 2007 for the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of

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ADDITIONAL E

A Format B economic analysis has been prepared for this project. Items required per regulatory direction do not require economic analysis. Exception 1-3.03) of AF 11-28 applies.

The status quo is not an acceptable alternative. It would allow possible fireball in mixer or press bay which could block safe egress from the

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11. REQUIREMENT: 6.200 SF ADEQUATE: SF SUBSTD: 6.200 SF PROJECT :

Construct two propellant powder storage igloos, and demolish existing substandard wood frame structures.

### REOFIREMENT :

this project is recorded provide powder storage facilities at TCAAP that will meet criteria of Army security and safety regulations.

1. COMPONENT FY 1989 MILITARY CONSTRUCTION PROJECT DATA			2 DATE	
ARMY				
3. INSTALLATION A Twin Cities Minnesota	Army Anno Pt	,		
4. PROJECT TITLE		5 PROJECT	NUMBER TEMP	

### CURRENT SITUALIST :

Present facilities are substantarl, temporary wood structures that do not meet safety so unlivestandaris, and have been used under waivers which will probably a clone release.

### IMPACE IN NOTES THEFT

If this preject is opt quievel, us of the existing facilities will be possible only if walvers are granted in since the structures are not in compliance with AR 10011 and DARCOME 1903.

### ADDITIONAL :

The project jes received in this level is part of a total project for six storage project. First in the project to be constructed in FY88 (see First 1996).

Description F. P. Schulte.
The object E. Schulte.

ommanders Representative

EFFIMALE ON THE SUBJECT OF STREET	API II.	[484	INDEX: 1623
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1. COMPONENT		2 DATE
ARMY	FY 1989 MILITARY CONSTRUCTION PROJEC	CT DATA
3. INSTALLATION A	ND LOCATION Army Ammo Pt	
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### 10 Description of Proposed Construction

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II. FRINTERMENT: THE ADROVATE: SE TEVERTO: TITLE SE

This project will correct electrical distribution beforencies at Holston related to the spacing between distribution line poles, provide underground electrical service to explosives operating buildings, and upgrade the lightning protection system for the explosives plant and support facilities

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Project 1=20000A is programmed to correct lightning protection but not the other electrical distribution deficiencies.

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PROJECT: (CONT)..

to contorm to the latest requirements of AMCR (85-100 Safety Manual dated August 1965. To project will be neith the present and future modernization, that the date is required during the section. It is not since correction of these problems as regarded during the section. It is remove will be gained by designing and installing the new systems under the same project rather than presented under separate projects.

REQUIREMENT :

Fig. 6 to 5 Wolfe will correct all distribution and lightning protection between the William at Helpton and a common with AMCR 385-100 for all of the relation for all of the relationship.

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CURRENT SITUATION :

The lightning prot Sie, a long roung, and underground electrical arvier requirements at the Enry Sifety Minual are presently in violation at histon. Diring the roundstrate that the first some reconfiguration of existing the filters, the Army Sifety community has insisted that the plant be brought enter empliants with the "latest" regulations. This has presented some intrivalty in the most of the presently active project designs were initiated prior to the adoption of the new regulations. During this period the subject definion for were not addressed. In addition, cost constraints will prevent a to a wife on the adoption projects and the necessary project family will not be acculable to correct the deficiencies. Start-up of the error of including will after a Hamiltonian ability to meet projected FYDP, studypling, mid-limition, in the set 199. Modernization levels to which Hallston is a familiaries.

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